

**STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
OFFICE ENGINEER**



**READY-TO-LIST and
CONSTRUCTION CONTRACT
AWARD GUIDE (RTL Guide)**

May 2004



FOREWORD

This "Ready-to-List and Construction Contract Award Guide" (RTL Guide) is published by the Division of Engineering Services-Office Engineer (DES-OE) to establish uniform procedures, define responsibilities, and provide guidance for preparing construction contract documents. Uniformity is essential in order to ensure conformity with State and federal requirements and policies.

This RTL Guide supersedes the previously published "Plans, Specifications, and Estimate Guide." This Guide adds to the scope of the previous "PS&E Guide" by comprehensively describing the requirements to achieve the Ready to List (RTL) milestone. Similarly, the new "RTL Certification" form presented in this Guide supersedes the previous "Attachment A" document.

DES-OE has also established a new operational "Service Level" that enables projects that have been brought to the RTL milestone to be submitted to DES-OE for immediate listing for advertisement. This new Service Level configuration is compatible with Statewide QC/QA (Quality Control / Quality Assurance) implementation goals.

Preparation and submittal of PS&Es or contract documents at the RTL milestone for Department projects shall conform to this Guide, the Plans Preparation Manual, the Standard Plans, the Standard Specifications, the Standard Special Provisions (SSPs) and their instructions, and other relevant Departmental guidance.

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RTLAND CONSTRUCTION CONTRACT AWARD GUIDE PURPOSE AND OVERVIEW

INTRODUCTION

The Ready-to-List and Construction Contract Award Guide (RTL Guide) describes activities, roles and responsibilities required to complete project Plans, Specifications and Estimate, to advertise, open bids, and award the construction contract.

This RTL Guide should be used to process projects as defined by Section 10105 of the Public Contract Code, which currently includes roadway, structure, and building projects with a total cost over \$120,000. The RTL requirements apply to all projects on State highways regardless of funding source.

The RTL Guide requires the Project Engineer (the Engineer of Record signing and sealing the Title Sheet on the Plans) to certify that a project is RTL. This is to ensure that all applicable design, right of way, environmental, regulatory, and statutory conditions have been addressed in the plans, specifications, and estimate. By exercising responsible charge in certifying the project as RTL, the Engineer of Record either personally performs the work or has validated the qualifications of any contributing technical specialists and the applicability of their work (per the Board for Professional Engineers and Land Surveyors California Code of Regulations, Title 16, Division 5, §§ 400-474.5).

This RTL Guide should be used by the Project Engineer, and others involved in project delivery, to complete final Plans, Specifications, and Estimate (PS&E), produce, advertise, open bids, and award construction contracts.

GENERAL

Section 10120 of the Public Contract Code (part of the State Contract Act) states, "Before entering into any contract for a project, the Department shall prepare full, complete, and accurate plans and specifications and estimates of cost, giving such directions as will enable any competent mechanic or other builder to carry them out." The purpose of this Guide is to provide a useful tool to accomplish our mutual goal to advertise legal, cost effective contracts that are biddable and buildable.

In the Public Contract Code section cited above, the terms "full, complete, and accurate" can be defined as follows:

- "Full" means that all existing and proposed elements necessary to bid and build the project within scope are included.
- "Complete" means that all elements are detailed.

- "Accurate" means that all elements comply with statutory and departmental requirements, field conditions are correctly depicted, and the Plans, Specifications, and Estimate are consistent.

Contracts can only be advertised after policy, statutory, and regulatory requirements are completed. The district must complete these requirements, working in conjunction with DES-OE, other Project Delivery Divisions, and, if required, by the Federal Highway Administration (FHWA) before DES-OE considers placing them on a list of projects proposed for advertisement. The Department's Project Management Directive 006, "Project Change Requests," defines RTL as follows:

"To qualify a project as 'Ready to List', the project must have all clearances and approvals necessary to advertise a project. This includes having all permits, agreements, appropriate Right of Way certification, and FTIP (Federal Transportation Improvement Program) approval. If new requirements are identified during processing, the project may be delayed, putting delivery at risk while issues are resolved."

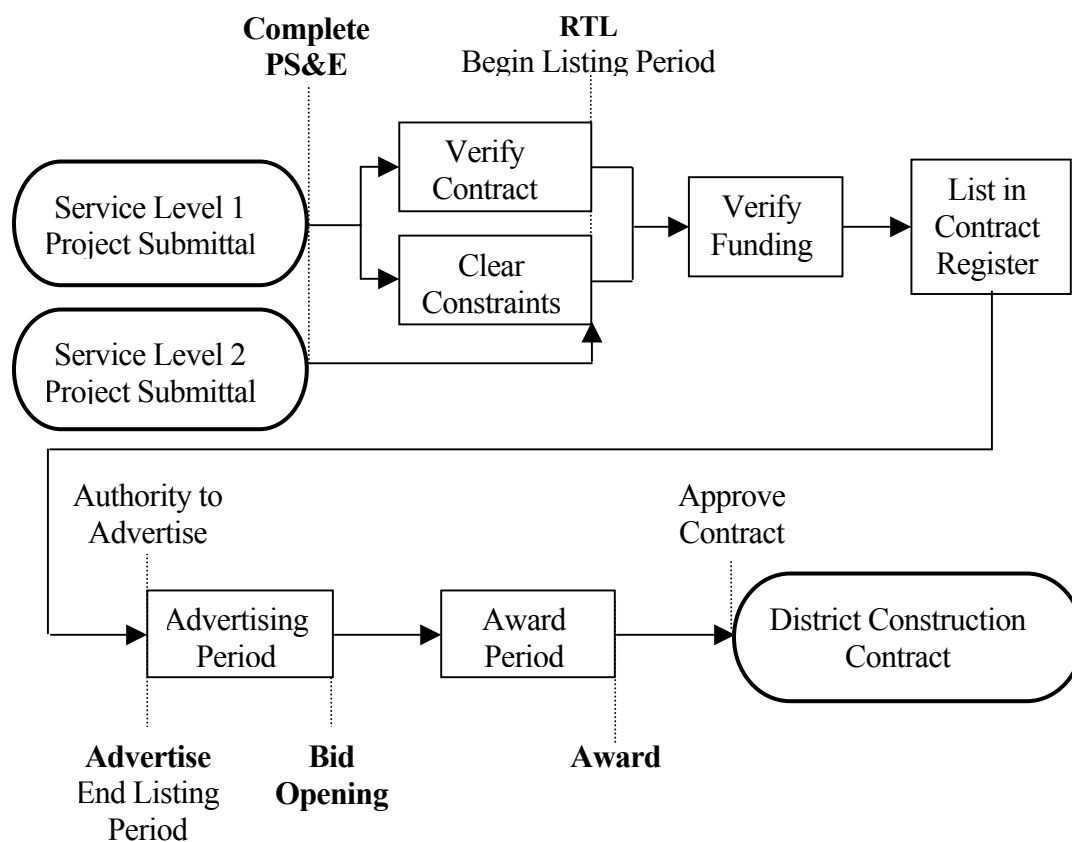
Projects are advertised when they are RTL and fully funded. Once advertised, contracts proceed to bid opening, award, and approval. DES-OE has the primary responsibility for these tasks with input from the districts and Divisions. To complete the award process, funds must be sufficient to provide the total cost based on the bid amount. In addition, the contractor must be validated as the lowest responsible bidder according to the appropriate policies, statutes, and regulations governing State and federal contracts.

This RTL Guide has been developed in concert with FHWA to verify completion of various federal requirements. A thorough understanding of the Department/FHWA Stewardship Agreements is encouraged to fully comprehend the level of FHWA involvement and requirements. This Agreement may be accessed at:
<http://www.fhwa.dot.gov/cadiv/docs/stewardship.htm>

RTL PROCESS OVERVIEW

Figure A is an overview of the sequence of activities and their associated milestones. Each activity and milestone is discussed below. **Bold text** in the figure and the process definitions indicate milestones.

Figure A
RTL Process



RTL PROCESS DEFINITIONS

Complete PS&E: The District submits full, complete, and accurate (ready) PS&E package, except any modifications due to pending constraints. See Section 3, "Roles and Responsibilities," related to RTL.

Verify Contract:

1. Draft Contract Comments – DES-OE or District Office Engineer (DOE) verifies the fullness, completeness, and accuracy of the district PS&E. Contract documents are drafted based on DES-OE or DOE review in a format that a competent mechanic can bid and build (biddable and buildable).
2. District Response – District addresses draft contract comments.
3. Draft Contract Ready – DES-OE or DOE finalizes the contract documents for advertisement.

Clear Constraints: District meets all R/W requirements (Certification), Environmental requirements (Certification), FHWA requirements, and Design requirements on the RTL Certification.

Verify Funding: DES-OE or district verifies that all funds necessary for construction are ready for encumbrance, i.e., the California Transportation Commission (CTC) has voted funding, Division of Maintenance has committed funding, Legal Division has signed any cooperative agreements and cooperative agreement numbers assigned, and the Division of Local Assistance has provided a Finance Letter.

List in Contract Register: Per Government Code Section 14827.2, DES-OE lists the project in the California State Contract Register before advertisement. During the listing period the contract documents are prepared for publishing, goals are established for Disadvantaged Business Enterprise (DBE) and Disabled Veterans Business Enterprise (DVBE) participation, and approval to advertise is obtained from FHWA.

Advertise: DES-OE approves advertisement, and the contract bid documents are made available to bidders.

Award: DES-OE determines the lowest responsive and responsible bidder and awards the contract. After contract award, the contractor executes the contract and it is approved by Legal Division. This process normally takes 10 working days.

RTL GUIDE ORGANIZATION

This Guide is organized into the following Parts, Sections and Appendices:

- **Part 1** describes the RTL process, and contains the requirements for RTL certification and subsequent DES-OE operations. This Part defines the general roles and responsibilities of the personnel involved in that process.
 - **Section 1** describes the requirements for RTL, and provides instructions for completing each of the sections within the RTL Certification Form.
 - **Section 2** defines "RTL Certification," and describes the procedure for completion and submittal of the RTL Certification Form.

- **Section 3** describes the services provided by DES-OE to assist districts in completing RTL requirements.
- **Section 4** describes the DES-OE services in listing, advertising, opening bids, awarding, and approving construction contracts.
- **Part 2** is composed of **Sections 5 through 15** and is based on updated and revised information from the previous "PS&E Guide." These sections describe in detail the policies, procedures, roles, and responsibilities for delivery activities involved in final PS&E validation, draft contract development, contract advertisement, bid opening, and award. These sections supplement other Department manuals and reference materials.
- **Appendices A through D** are respectively:
 - "DES-OE Organization and Contacts,"
 - "Forms and Miscellaneous Information,"
 - "Definition of Acronyms," and
 - "Websites."
- **Appendix E** is the PS&E Submittal Cover Memorandum
- **Appendix F** is the RTL Certification Form

PART 1 RTL PROCESS DESCRIPTION

SECTION 1 Requirements For Ready-To-List

1.1 PURPOSE

This section describes RTL requirements and provides general references, roles, and responsibilities. The section provides a brief description of each requirement, a reference to the applicable law, regulation, policy or procedure, and instructions for completing the Ready-to-List (RTL) Certification Form.

1.2 ROLES AND RESPONSIBILITIES

1.2.1 PROJECT ENGINEER (PE)

The PE is the registered engineer in responsible charge of the Plans, Specifications, and Estimate whom:

- Signs and seals the Title Sheet of the Plans.
- Certifies that the project meets all the criteria for RTL.

1.2.2 DESIGN ENGINEER OR MANAGER

The Design Engineer or Manager is the supervisor of the PE. The Design Engineer or Manager's approval indicates the PE has the knowledge and experience to assure that the RTL requirements are complete.

1.2.3 PROJECT MANAGER

The Project Manager reviews and signs the PS&E Submittal.

1.2.4 DEPUTY DISTRICT DIRECTOR, DESIGN

When the RTL Certificate is sealed by the Design Engineer, the Deputy's approval indicates the Design Engineer or Manager has the knowledge and experience to assure that the RTL requirements are complete.

1.2.5 DISTRICT OFFICE ENGINEER (DOE)

- Verifies that the plans, specifications, and estimate are full, complete, and accurate.
- Ensures the segregated estimates are correctly prepared.

1.2.6 STRUCTURE PROJECT ENGINEER

The Structure Project Engineer is the registered engineer in responsible charge of the structure plans.

1.2.7 STRUCTURE OFFICE ENGINEER (SOE)

The SOE is the registered engineer in responsible charge of the specifications, cost estimate, and working day schedules for the structure portion of the PS&E Package.

1.2.8 DES-OE

Verifies the project meets RTL certification requirements.

1.3 REQUIREMENTS

The following items provide instructions for completing RTL. The rightmost number of the following section numbers (e.g., 1.3.2, 1.3.3) correspond to the sections within the RTL Certification Form.

1.3.1 PROJECT IDENTIFICATION

Enter project identification data as indicated. See the Project Development Procedures Manual (PDPM), Chapter 2, Figure 2, for determination of FHWA oversight. Note that the designation "Exempt" is now changed to "State Authorized," and the designation "Non-Exempt" is now changed to "Full Oversight."

1.3.2 RIGHT OF WAY (R/W) CERTIFICATION

Overview: R/W Certification is a written statement summarizing the status of each Right of Way related matter pertaining to a proposed construction project. The R/W Certification documents that the construction project is ready for advertising. The Department must have control of the property before work can be performed which affects that property.

References: Title 23 of the Code of Federal Regulations (CFR) Sections 635.309 and 710.311, and Right of Way Manual Chapter 14.

Certification: Districts are to obtain a R/W Certification 1, 2, 3 or 3W as a condition of RTL. R/W Certification 3 must be upgraded, or 3W must be updated before bid opening. Indicate the certification obtained with a check mark and provide a copy to DES-OE.

a. Certification No. 1 (Cert. 1)

Overview: For projects to be certified under a R/W Cert. 1 the district confirms that the State has full legal and physical possession of all necessary Right of Way.

b. Certification No. 2 (Cert. 2)

Overview: The R/W Cert. 2 has the same requirements as Cert. 1 with the exception that the State's right to occupy and use one or more parcels are by virtue of effective Rights of Entry or Agreements for Possession and Use.

c. Certification No. 3 with Work-Arounds (Cert. 3W)

Overview: The R/W Cert. 3W allows for the physical construction of a project to commence when the State does not have the necessary Right of Way (Cert. 1) nor the right to occupy and use one or more parcels (Cert. 2). Cert. 3Ws are approved on an extremely limited basis. Parcels to be worked around must be clearly identified and delineated in the project plans.

Certification: On federal aid projects requiring full FHWA oversight, a Cert. 3W must be approved by FHWA. All projects with a Cert. 3W must have the status of certification updated three weeks before bid opening. Provide the target date for the update. Provide a copy of the R/W Certification and Approval Memorandum from Division of Right of Way to DES-OE.

d. Certification No. 3 (Cert. 3)

Overview: The R/W Cert. 3 allows for the advertisement of a project when the State does not have the necessary Right of Way (Cert. 1) nor the right to occupy and use one or more parcels (Cert. 2). Cert. 3s are approved on an extremely limited basis.

Certification: On federal aid projects requiring full FHWA oversight, a Cert. 3 must be approved by FHWA. A Cert. 3 is to be upgraded to a Cert. 1 or 2 three weeks before bid opening. Provide the target date for the upgrade. Provide a copy of the R/W Certification and Approval Memorandum from Division of Right of Way to DES-OE.

e. Railroad Clearance

Overview: A railroad facility on the Title Sheet indicates railroad clearances need to be addressed. There may be railroad involvement even if an item is as small as attaching guard railing to the abutment of an underpass, jacking a pipe beneath the railroad roadbed, entering railroad property for access to the work, or constructing a fence. To support federal funding authorization (E-76), the FHWA Engineer must review the Railroad Agreement and Construction Management agreement, if applicable, for projects requiring FHWA full oversight.

Reference: Title 23 CFR 646.216 and 635.309, Right of Way Manual Chapters 8, 13, and 14.

Certification: Indicate with a check mark if railroad clearance has been obtained for the project. If there is a Construction and Maintenance (C&M) agreement or service contract,

include the railroad company name, the agreement or Contract Number, and the amount of the cost estimate for services to be performed by Railroad work forces. Provide copies of the transmittal letter from Division of Right of Way, plus an electronic copy of the railroad clauses to be used to complete Section 13 of the special provisions.

1.3.3 ENVIRONMENTAL CERTIFICATION

a. Certification A

Overview: Environmental Certification assures that all the appropriate environmental commitments and permit conditions have been included in the PS&E. The Environmental Certification will be approved in accordance with the executive authorization provided by the Chief of the Division of Environmental Analysis and attached to the RTL Certification Form. Before the federal Authorization to Proceed (E-76) with the construction phase of the project, the district must establish whether the approved environmental document or Categorical Exclusion determination remains valid. Consultation with the FHWA Engineer is required for all projects with federal-aid or federal involvement, including those projects designated as "State authorized" (exempt from oversight) in the FHWA Stewardship Agreement (January 2003).

Reference: Title 23 CFR 771, Title 13 PRC 21000 et seq., and the Department's Standard Environmental Reference.

Certification: Indicate with a check mark that the Environmental Certification form is attached and the date it was signed.

1.3.4 DESIGN CERTIFICATION

a. Mandatory and Advisory Design Standards

Overview: Mandatory design standards are those considered most essential to achievement of a project's overall design objectives. Many pertain to requirements of law or regulations such as those embodied in FHWA's mandatory 13 controlling criteria. Advisory design standards are based on good design practices adopted by the Department.

Reference: Highway Design Manual (HDM) Section 80.

Certification: Indicate with a check mark if the project meets criteria. Districts are to certify that the project meets all mandatory and advisory design standards and to provide documentation for approved deviations.

b. Exceptions to Mandatory and Advisory Design Standards

Overview: The design exception process results in a written record that documents the engineering decisions for each and every exception from a mandatory and advisory design standard. To maintain design immunity in tort liability cases, appropriate documentation

is prepared and preserved for exceptions. The responsibility for approval of all exceptions to Mandatory Design Standards on State Highway and local facility (within State Right of Way) projects has been delegated to the Division of Design, Design Coordinator. Certain Mandatory Design Exceptions require FHWA approval. Advisory Design Exception Fact Sheets are approved by the district/region in accordance with district/region policy.

Reference: Title 23 USC Section 109, HDM, Design Memos and Design Information Bulletin.

Certification: Indicate with a check mark if the project meets the criteria. The approved Design Exception Fact Sheet must be included in the project history file. Design exceptions to the criteria in 23 USC 109 are to be listed in a "Project Design Exceptions" attachment which is to be included in the PS&E submittal. For federal-aid full oversight projects, FHWA is required to approve any exceptions to mandatory standards. Date of FHWA approval is to be provided.

c. Statewide Design Policy Compliance

Overview: Design Policy Compliance items shown in Section 4c of the RTL Certification Form constitute the current list of items that need to be certified, if applicable.

Reference: Guidance for the Design Policy Compliance items is shown in parentheses after the item description on the RTL Certification form.

Certification: Indicate with a check mark that the item is applicable to the project, and that all the associated requirements are completed. If required, documentation is to be included with the project submittal unless otherwise noted by the guidance.

d. Serious or Critical Water Shortage

Water for Construction Project

Overview: An adequate water supply for project construction avoids additional delays and costs.

Reference: HDM Chapter 900 and PDPM Chapter 29.

Certification: Indicate with a check mark if project has a serious or critical water shortage, and a water source commitment has been obtained. Include copies of the water source commitment with the PS&E submittal.

Water for Landscape Project

Overview: Advertisement of Highway Planting or Roadway Construction projects which include new planting or irrigation work may be delayed if the local water agency has

declared a serious or critical water shortage. Documentation of water availability for new planting or irrigation work is required during a serious or critical water shortage.

Reference: HDM Chapter 900 and PDPM Chapter 29.

Certification: Indicate with a check mark if project has a serious or critical water shortage, and a water source commitment has been obtained. Documentation shall be submitted with the project submittal, and a copy shall be submitted to the Office of State Landscape Architecture.

e. Agency Agreements

Overview: Entities other than the Department have interests in transportation projects. Negotiations with these agencies occur during many phases of the project's development. Some projects are financed jointly by the Department and other local or State governmental agencies or private entities. Cooperative agreements are used with local agencies to outline the responsibilities and obligations that have been negotiated.

Reference: Streets and Highways Code, Section 114, PDPM Chapters 13 and 16, and Cooperative Agreement Manual.

Certification: Indicate with a check mark if agreements are involved. Identify the agency, provide the date the agreement was issued, and show the dollar amount. Submit a copy of fully executed agreements with the PS&E submittal.

1.3.5 FHWA

The PE should obtain FHWA Design Approval as early in the design process as possible, preferably before PS&E submittal to DES-OE. FHWA's "Contract Administration Core Curriculum, Participant's Manual and Reference Guide contains basic administrative procedures and applicable policies related to federal aid design and construction contracts. See Appendix D, "Websites," for the link.

a. PS&E Approval

Overview: When a project involves federal funds or is on a federal system, FHWA is involved pursuant to the stewardship and delegation of authority agreements signed with the Department.

Reference: PDPM, Chapter 2, Section 7, DES Decision Document, "Include FHWA Design Approval in RTL," dated June 2, 2003. See Appendix D, "Websites," for the link to FHWA Stewardship Agreement.

Certification: Indicate with a check mark that the project design meets all federal requirements, and that all necessary federal design approvals have been obtained pursuant

to FHWA stewardship and delegation agreements. Provide written documentation of FHWA design approval to DES-OE.

b. Public Interest Finding Approval

Overview: FHWA Public Interest Finding (PIF) approval may be required for federally funded projects before a project can be deemed Draft Contract Ready and RTL. A public interest finding is required when any items listed under "Certification" below are involved. Note that FHWA approval of PIFs has been delegated to Division of Budgets, Office of Federal Resources, for State authorized projects. However, all PIFs must be submitted to the Department's Federal Resources Office, Division of Budgets, for approval processing.

Reference: Title 23 CFR. FHWA's "Contract Administration Core Curriculum, Participant's Manual and Reference Guide" at <http://www.fhwa.dot.gov/programadmin/contracts/coretoc.htm>. See Appendix B, "Forms and Miscellaneous Information," for the PIF form.

Certification: If a PIF is required, indicate with a check mark that PIF approval has been obtained. All PIF requests must be processed through the Office of Federal Resources to obtain approval. Full oversight projects require FHWA approval. State authorized projects require Office of Federal Resources approval. The approved PIF should be submitted at the time of PS&E submittal. Indicate which of the following are parts of the finding:

- Advertising period of less than 3 weeks.
- Buy America.
- Convict-produced materials (as State-furnished).
- Force Account use, when incidental to the work.
- Mandatory borrow or disposal sites.
- Patented or proprietary materials specified. See Section 6 for more information.
- State-furnished materials not approved by FHWA. See Section 7 for the list of approved State-furnished materials.

1.3.6 PLANS, SPECIFICATIONS, AND ESTIMATE CERTIFICATION (DRAFT CONTRACT READY)

Full, complete, and accurate PS&Es lower bidding risk, improve competition, and facilitate contract administration.

a. Complete Plans

Overview: Complete plans prescribe the details of the work, including construction details not covered by the Standard Plans.

Reference: Section 5, "Validation of Complete Plans, Specifications, and Estimates."

Certification: Indicate with a check mark if plans are complete.

b. Plans Conformity

Overview: The plans shall conform to the Plans Preparation Manual.

Reference: Section 5, "Validation of Complete Plans, Specifications, and Estimates."

Certification: Indicate with a check mark if plans conform.

c. Complete Specifications

Overview: Complete specifications prescribe the details for construction and payment of the work.

Reference: "Validation of Complete Plans, Specifications, and Estimates" and Section 6, "Specification Preparation."

Certification: Indicate with a check mark if specifications are complete.

d. Specification Conformity

Overview: Project special provisions shall conform to the Specification Preparation Guide.

Reference: Section 5, "Validation of Complete Plans, Specifications, and Estimates" and Section 6, "Specification Preparation."

Certification: Indicate with a check mark if specifications conform.

e. Complete Estimate

Overview: Complete estimate quantifies the scope of work.

Reference: Section 5, "Validation of Complete Plans, Specifications, and Estimates," Section 7, "Project Estimate of Cost Preparation," GES 337 course manual ("Beginning BEES"), and GES 292 course manual ("Advanced BEES").

Certification: Indicate with a check mark if estimate is complete.

f. Estimate Conformity

Overview: Project Estimate shall meet the requirements in Section 5, "Validation of Complete Plans, Specifications, and Estimates."

Reference: Section 5, "Validation of Complete Plans, Specifications, and Estimates," Section 7, "Project Estimate of Cost Preparation," GES 337 course manual ("Beginning BEES"), and GES 292 course manual ("Advanced BEES").

Certification: Indicate with a check mark if estimate conforms.

Section 2 RTL Certification

2.1 PURPOSE

This section describes RTL Certification processing. Details on how to complete each RTL requirement are discussed in Section 1.

The RTL Certification documents the accomplishment of applicable Ready-to-List requirements. A draft RTL Certification documents the status of the various requirements. A final RTL Certification documents that all applicable requirements have been met and the project is RTL. For a project to be deemed RTL, the PE must stamp and seal the final RTL Certification.

2.2 ROLES AND RESPONSIBILITIES

2.2.1 PE

The PE is the registered engineer in responsible charge of the Plans, Specifications and Estimate and is the Engineer of Record signing and sealing the Title Sheet of the Plans.

The PE certifies that the project meets all the criteria for RTL. By sealing and signing the final RTL Certification, the PE certifies that all applicable design, right of way, environmental, regulatory, and statutory conditions have been addressed in the plans, specifications, and estimate. By exercising responsible charge in the certifying RTL, the PE either personally performs the work or has validated the qualifications of any contributing technical specialists and the applicability of their work (per the Board for Professional Engineers and Land Surveyors California Code of Regulations, Title 16, Division 5, §§ 400-474.5).

Business And Professions Code, Section 6735.5 states, "The use of the word 'certify' or 'certification' by a registered professional engineer in the practice of professional engineering or land surveying constitutes an expression of professional opinion regarding those facts or findings which are the subject of the certification, and does not constitute a warranty or guarantee, either expressed or implied."

2.2.2 DESIGN ENGINEER OR MANAGER

The Design Engineer or Manager is the supervisor of the PE. The Design Engineer's or Manager's approval indicates the PE has the knowledge and experience to assure that the RTL requirements are complete.

2.2.3 DOE

Assists the PE in preparing and submitting the RTL Certification.

2.3 PROCEDURE FOR COMPLETION AND SUBMITTAL

The RTL Certification Input Form (Form) is obtained from the DOE, who can assist in preparing and submitting the Form. The Form is contained in the Submittal Database that the DOE is required to use to submit projects to DES-OE. A suggested procedure for preparing and submitting the PS&E is as follows:

Before project submittal to DES-OE, the PE obtains a Transmittal Memo and RTL Certification Input Form from the DOE. The input form will contain preparation instructions. If the PE has any questions, the DOE can assist.

The DOE inputs the information into the Submittal Database and prints either the Draft or Final RTL Certification for completion and signature.

A completed Draft RTL Certification is required for projects processed under Service Level 1 (see Section 3.5.1). The PE must sign the Certification, but is not required to place his/her seal on the Draft. The Draft RTL Certification may identify incomplete requirements and target dates for completion as well as completed requirements. Service Level 1 projects submitted with all requirements complete will still need to be verified by DES-OE. After verification by DES-OE, the district will be provided with confirmation at which time the district may print a Final RTL Certification for the PE to seal and sign. A completed Final RTL Certification must be received in DES-OE for a project to be deemed RTL.

The Final RTL Certification is also used to submit projects under Service Level 2 (see Section 3.5.2). The PE may Certify RTL on Service Level 2 projects when all RTL requirements have been met and he/she has stamped and sealed a completed RTL Certification. Presently, only Authority to Advertise District Delegation projects (see Section 15) may be processed under Service Level 2.

Section 3 DES-OE RTL Services

3.1 PURPOSE

This section describes services available from DES-OE to assist districts in reaching RTL and the procedures for securing those services. Note that DES-OE services for contract advertisement and award are discussed in Section 4.

DES-OE services include Service Level 1, Service Level 2, RTL Liaison, Training, Concurrent Review, Workload Sharing by Cross Training, Risk Advertisement, Informal Bids Process as described below.

3.2 BACKGROUND

By executive authorization, DES-OE is responsible for all activities related to advertising, bid opening, award, and contract approval for Minor "A," Major Maintenance, and Major capital highway construction contracts that are advertised by the Department. Depending on the executive authorization either the district or DES-OE is responsible for the verification that a project is ready for advertisement.

Quality control of projects before advertising has been increasingly delegated to the districts. Headquarters Office Engineer, before 1988, solely prepared the contract based on draft plans, suggested specifications, and quantities submitted by the districts. Between 1988 and 1990, resources and the responsibility for preparing the draft PS&E were distributed to the districts. In 2001, the responsibility for preparing completed projects, RTL with funding approved was delegated to identified District Directors for CTC delegated SHOPP (State Highway Operations and Protection Program) projects less than \$1 million, Minor "A," and Maintenance projects (AADD). With the development and implementation of Quality Control/Quality Assurance (QC/QA), districts will ultimately be able to submit to DES-OE projects of any size at the Ready-to-List milestone.

3.3 ROLES AND RESPONSIBILITIES

3.3.1 DISTRICT DIRECTOR

- Approves the Authority to Advertise for delegated projects.
- Requests Risk Advertisements, Risk Votes, pre-Bid and pre-Award Qualifications, retention of shelf projects, and Contingency Reductions.

3.3.2 DEPUTY DISTRICT DIRECTOR, PROGRAM/PROJECT MANAGEMENT

- Requests Risk Advertisements.

- Approves Allocation Change Requests.

3.3.3 PROJECT MANAGER

Establishes and maintains project schedules and ensures adequate resources are allocated appropriately to advertise, award, and execute contracts.

3.3.4 PE AND DISTRICT OVERSIGHT ENGINEER

Provides timely information or clarification needed by DES-OE.

3.3.5 DOE

Ensures that PS&E submittals are prepared and processed in conformance with the Department's policies, procedures, adopted standards, and the requirements in this RTL Guide.

3.3.6 DES-OE

- Prepares and processes district PS&E submittals as final contract documents dependent on district requests for services.
- Advertises construction contracts.
- Awards construction contracts to the lowest responsible bidder.

3.3.7 DES-OE SCHEDULING ENGINEER

- Receives PS&E submittals and verifies completeness.
- Monitors completion of RTL requirements.
- Verifies sufficient funding is available to proceed with contract advertisement.
- Lists projects for advertisement.
- Schedules advertisement and bid opening dates.
- Negotiates project schedules and DES-OE services.
- Creates project management and monitoring reports.

3.3.8 SOE

Transmits the structure portion of the PS&E Package to the DOE.

3.4 PROCEDURE

Currently, only projects eligible for processing under AADD (see Section 15) may be processed under Service Level 2. All other projects must be processed under Service Level 1.

See Section 3.6 for other services provided by DES-OE. Contact the Scheduling Engineer to request these services.

DES-OE Service Level 1 must be requested for all Major Projects from the DES Project Coordination Engineer (PCE). Adequate resources for DES-OE activities must be provided in XPM before January 9th for the fiscal year following that date, and the project must appear on the fiscal year Baseline Delivery Plan.

Major projects submitted not on Baseline Delivery Plan and/or without adequate resources in XPM will not be accepted without an approval from the Division of Project Management. An "Extraordinary Workload Request Notification" form will be processed by DES to address potential resource needs. Project assignment is subject to available resources.

3.5 SERVICE LEVELS

The following DES-OE Service Levels assist the districts in developing projects to advertisement:

- **Service Level 1** (full processing) is DES-OE's standard service that includes verification of complete PS&E, preparation of the draft contract, verification of completion of advertising constraints, and verification of adequate funding before contract advertisement.
- **Service Level 2** (independent assurance for projects certified by the district) is DES-OE's reduced Service Level, where the districts verify and certify those items described in Service Level 1 above. DES-OE will perform independent assurance (IA) on various key performance indicators. IA reports will be provided to management for evaluation of a district's/region's delegation to self-certify RTL.

Service Level 2 is currently only available for projects eligible under AADD. Expansion of this Service Level to other projects is contingent upon Department policy and implementation of Quality Control/Quality Assurance for project delivery.

3.5.1 SERVICE LEVEL 1 – FULL PROCESSING

Overview: "Full processing" consists of:

- Preparing the Draft Contract (see Section 8, "DES-OE Scheduling").
- Validating district completion of RTL requirements for R/W, Environmental and Design (see Section 1, "Requirements of RTL").

- Validating that sufficient funds are available for contract advertisement including that federally funded projects have an approved Federal Authorization to Proceed (E-76). See Section 9, "Funding Package."
- Listing, advertising, opening bids, and awarding the contract, and processing the approval. See Section 4, "Construction Contract Award Services."

Requirement: See Section 10, "PS&E Submittal Requirements."

3.5.2 SERVICE LEVEL 2 – INDEPENDENT ASSURANCE FOR PROJECTS CERTIFIED BY THE DISTRICTS

Overview: IA for projects certified as RTL and funded by districts consists of:

- Assuring that federally funded projects have an approved Federal Authorization to Proceed (E-76). See Section 4, "Construction Contract Award Services."
- Listing, advertising, opening bids, and awarding the contract, and processing the approval.
- Performing IA and providing feedback.

This Service Level is currently available only for AADD projects.

Requirement: See Section 10, "PS&E Submittal Requirements."

3.6 OTHER SERVICES

3.6.1 RTL LIAISON

Overview: DES-OE Area Seniors can advise and train the districts on requirements for RTL delivery and preparation of draft contracts. This service is similar to services provided by divisions of Design and Traffic Operations.

Requirement: The Districts request service and allocate resources to DES-OE. Scheduling is subject to DES-OE workload.

3.6.2 TRAINING

Overview: DES-OE provides various training opportunities on RTL requirements and preparation of draft contracts.

Reference: Capital Projects Skills Development (CPSD) and DES-OE Training websites or contact DES-OE.

Requirement: Form 300

3.6.3 CONCURRENT REVIEW

Overview: Concurrent review may be performed to help meet a critical target date and involves DES-OE performing the Draft Contract activity Workload Breakdown Structure (WBS) Activity 260 concurrently with DOE processing of final PS&E, WBS Activity 255.

Reference: Work Breakdown Structure (WBS).

Requirement: The Districts request service and allocate resources to DES-OE. Scheduling is subject to DES-OE workload and staff availability.

3.6.4 WORKLOAD SHARING BY CROSS TRAINING

Overview: Workload sharing and cross training (including specialty areas) is training DES-OE and district staff on performing WBS activities 255 and 260 to allow brokering during peak periods.

Reference: Work Breakdown Structure (WBS).

Requirement: Agreement by the Chief, Office of PS&E, DES-OE, and valid charging practices.

3.6.5 RISK ADVERTISEMENT

Overview: Risk advertisement is a technique to help expedite the start of construction of a critical project when all advertising requirements have not been met or obtained.

Reference: Memorandum dated September 3, 2002, "Risk Advertising Policy Update." See Appendix D, "Websites," for the link to this memo.

Requirement: Designated district executive requests approval from the Deputy Director for Project Delivery or his/her delegate. For contracts that require a CTC vote for fund allocation, advertisements can only occur after allocation. For federally funded projects, FHWA must approve the risk advertising request.

3.6.6 INFORMAL BIDS PROCESS

Overview: The informal bids process may be used on emergency projects to reduce PS&E processing, advertising, and award time.

Reference: Section 12, "Informal Bids Projects," and Section 10122 of the State Contract Act.

Requirement: Approved Director's Order.

Section 4 Construction Contract Award Services

4.1 PURPOSE

This section provides an overview of the DES-OE services required to award construction contracts and discusses district activities necessary to complete the award.

4.2 BACKGROUND

By executive authorization DES-OE is responsible for all activities related to advertising, bid opening, award, and contract approval for Minor "A," Major Maintenance, and Major capital highway construction contracts that are advertised and awarded by the Department.

4.3 ROLES AND RESPONSIBILITIES

4.3.1 PROJECT MANAGER

(Dependent on district delegation) either reviews or approves the award recommendation before submittal to DES-OE.

4.3.2 PE, DESIGN ENGINEER, AND DISTRICT OVERSIGHT ENGINEER

Provides information or clarification needed by DES-OE and may sign contract award recommendation.

4.3.3 DOE

- Acts as liaison for DES-OE and the district to resolve issues in a timely manner.
- Reviews and (dependent on district delegation) either concurs with or approves recommendation.

4.3.4 DES-OE

- Advertises construction contracts and awards contracts to the lowest responsible bidder.
- Prepares and processes the documents needed to award or reject a project.

4.3.5 DIVISION OF BUDGETS-OFFICE OF FEDERAL RESOURCES

- Prepares the Federal Detailed Estimate after bid opening based on the low bid.
- Provides a copy to DES-OE within one week upon request.

4.3.6 FHWA

- Approves major addenda for full oversight federal aid projects.
- Concurs with contract award for full oversight projects, including approval of DBE submittal.

4.4 LISTING PERIOD

The listing period, typically four weeks, is the time required to prepare final contract documents for distribution to prospective bidders. The term "listing" refers to the requirement that each contract subject to the State Contract Act be listed in the Department of General Services' "Contract Register," before advertisement.

4.5 ADVERTISEMENT

A project is ready for advertising when it is:

- RTL.
- Fully funded (voted by the CTC; cooperative and other agreements are executed; budget is authorized).
- Federally authorized, if federal funds are involved.

Advertising periods can range from three to ten weeks or more depending on the cost or complexity of the project.

4.6 ADDENDA

Changes in contract documents during advertisement are made by the addendum process. Addenda are issued to correct significant errors, omissions, or conflicts in the bid documents. Addendum requests are reviewed by DES-OE and are either approved and processed, or denied. Project changes after bid opening can only be made by 1) writing a contract change order (CCO) during construction, or 2) rejecting all bids and readvertising as a new project.

See Section 13, "Contract Addendum Request," for instructions for preparing an addendum request.

4.7 BID OPENING AND AWARD

Bid openings for projects in districts 1-6, 9, and 10 are on Tuesdays and/or Wednesdays in Sacramento. Bid openings for projects in districts 7, 8, 11, and 12 are on Thursdays in Irvine. Bid openings for informal bids contracts may be scheduled by DES-OE for any day of the week or any location.

4.7.1 DISTRICT RECOMMENDATION FOR AWARD

Departmental Policy requires a district or region to provide a Contract Award Recommendation Memorandum for each project. The district will send the recommendation to DES-OE within 5 working days following the bid opening. The recommendation is to include the following:

- Comments relative to the discussion with the apparent low bidder. District personnel are encouraged to confer with the Division of Construction and other appropriate DES or Headquarters functional units before deciding whether a bid is acceptable.
- The dollar amount and percentage difference between the Engineer's Estimate and the low bid amount.
- Date of the bid opening.
- Number of bids opened.
- Confirmation that requirements have been met and concurrences obtained.
- Confirmation of escrow of bid documentation, when required, was successfully completed by the three low bidders.
- Confirmation for federal full oversight projects that FHWA has reviewed and concurred in the PS&E, and the Right of Way Certification has been updated, if necessary.
- Conclusions from the district bid analysis and reasons for discrepancies in the bid.
- Recommendation to award to the apparent low bidder or to reject the bid.

The recommendation is to be signed by the DOE (or if signed by someone else, then initialed by the DOE), and sent by FACSIMILE to DES-OE, Awards Unit.

See Section 14, "District Recommendation for Award," for instructions on preparing a Recommendation Memorandum.

PART 2 RTL INSTRUCTIONS

Section 5 Validation of Complete Plans, Specifications, and Estimates

5.1 PURPOSE

This Section provides guidance to validate that the PS&E is full, complete, and accurate.

5.2 ROLES AND RESPONSIBILITIES

5.2.1 PE

Ensures that the PS&E is full, complete and accurate.

5.2.2 STRUCTURE PROJECT ENGINEER

Ensures that the structure portion of the project plans and quantities adheres to standards.

5.2.3 SOE

- Verifies that the structure plans are full, complete, and accurate.
- Prepares the structure portion of the Estimate.
- Prepares and approves the structure portion of the project special provisions.

5.2.4 DOE

- Verifies that the PS&E is full, complete, and accurate.
- Combines the structure and highway portions of the project special provisions.
- Verifies that the segregated estimates are correctly prepared.
- Submits the PS&E to DES-OE. The DOE has additional responsibilities for AADD projects as described in Section 15, "Authority to Advertise District Delegated (AADD) Projects."

Service Level 1

Ensures responses to draft contract comments are provided to DES-OE.

5.2.5 DES-OE

Service Level 1

- Verifies that the PS&E is full, complete and accurate.
- Provides draft contract comments to the DOE and SOE.
- Incorporates District Response into the contract.
- Recommends approval of Section 2 of the RTL Certification.

Service Level 2

- Independently ensures that the draft contract meets the RTL Certification requirements in this Guide.
- Provides feedback of the IA findings to DOE.
- Recommends corrective action to non-compliance of a district certified draft contract.

5.3 PROJECT PLANS CERTIFICATION

Project plans prescribe the details for completion of the work, including details for items not covered by the Standard Plans. Project plans are prepared following the standards in the "Plans Preparation Manual" (see Appendix D, "Websites"). Computer-aided Design and Drafting (CADD) prepared plans shall conform to the standards and procedures contained in the CADD Users Manual of Instructions. All project plans are developed on CADD.

Project plans are engineering drawings containing information from which contractors prepare bids, surveyors stake the project, successful bidders construct projects, and engineers inspect the contractor's work. The highway and structure portions are prepared by the district and DES-Structure Design (DES-SD) staff, respectively. These plans, as revised during construction, become permanent records in the form of As-Built plans for future reference.

PROJECT PLAN ENGINEERING REVIEW

General guidelines for engineering review are provided below. Additional engineering review information is provided in Section 2 of the Plans Preparation Manual. Checklists for plan verification are provided in Figure 5-1 of this Section and in Section 2 of the Plans Preparation Manual.

TYPICAL CROSS SECTION SHEETS

Elements of the structural section(s) are to be identified and thickness of the layers shown. Dimensions should be referenced to centerline or layout lines. Structural section designation numbers, if used, are to be consistent with those shown on the layout sheets of the plans.

LAYOUT SHEETS

Layout line/centerline designations and horizontal alignment (curve data) are to be shown. Cut and fill lines, pavement removal, existing pavements, curbs, dikes, sidewalks, driveways, wheelchair ramps, road approaches, right of way lines, and topography (when pertinent) are shown. Legends and symbols used which are not included in the Standard Plan abbreviations and symbols must be defined on the sheet where they first appear.

PROFILE SHEETS

Profile sheets show layout line and centerline designations (consistent with layout sheets), original ground line, and profile grade line. Roadway excavation and embankment quantities are shown at the bottom of the profile or summarized on the summary of quantities sheet.

CONSTRUCTION DETAILS SHEETS

Construction Detail Sheets provide supplemental information that cannot be shown on the layout plan sheets due to complex and extensive details. The details shown on the Construction Detail Sheet are unique to a specific project and not available in the Standard Plans.

DRAINAGE PLAN AND DRAINAGE PROFILE SHEETS

Drainage plans show layout and location of drainage facilities. System and unit identification of drainage facilities should be shown. Drainage profiles should show original ground line, finished grade lines and flow lines of drainage facilities. Construction details should be provided for drainage facilities for which there are no Standard Plans. A drainage summary of quantities is provided with columns for drainage facilities that are pay items.

UTILITY SHEETS

Utility sheets depict existing utilities clearly and accurately. The existing and relocated positions are shown on the utility sheets. If high-risk utilities are identified on the plans, both elevation and horizontal alignment of the facilities are shown. In some cases, only horizontal alignment is required. Plans for the work exempt from positive location must include a note on all plan sheets that states, "EXISTING FACILITIES HAVE NOT BEEN PLOTTED IN THESE PLANS."

STAGE CONSTRUCTION AND TRAFFIC HANDLING SHEETS

Traffic handling plans show how traffic will be routed. If stage construction is required, the plans show the sequence of operations, work to be performed, and materials to be used.

SUMMARY OF QUANTITIES SHEETS

Summary of Quantities designates the location and quantities for items shown throughout the plans. Column headings for pay items are the same as the description for the pay items in the Engineer's Estimate. Items of work that are not separate pay items are designated by "(N)."

For structure plans, a Summary of Quantities is placed on the General Plan sheet for each bridge summarizing the items of structure work for that particular bridge.

OTHER PLAN SHEETS

Other plan sheets are included to provide for other work shown or indicated on the layout sheets.

STRUCTURE PLANS AND DETAILS

DES-SD has the responsibility for preparing bridge plans. Plans are sent to the districts for a check on data pertaining to horizontal and vertical alignment and clearances. The electronic files are made available to DES-OE at PS&E Submittal, except for AADD projects, which are submitted to the district.

FINAL PAY ITEMS

Final pay items have sufficient detail, dimensions and information so that the quantities may be confirmed independently. Quantities are tabulated in the appropriate quantity sheets. Items are not designated as final pay items on the plans.

5.4 PROJECT SPECIFICATIONS CERTIFICATION

Specifications prescribe the details for the construction, completion, and payment of the work. Contract special provisions are an essential part of the contract and govern over all the other parts of the contract. They are compiled on a project-by-project basis from Standard Special Provisions (SSPs) with edits providing specific contract clauses setting forth conditions or requirements particular to the project and supplementary to the Standard Specifications. The highway and structure portions are prepared by district and structure staff, respectively. The contract special provisions are combined by DOE before submittal to DES-OE.

CONTRACT SPECIAL PROVISIONS REVIEW

General guidelines for reviewing the contract special provisions to ensure they are accurate and complete include but are not limited to the following:

- Items of work shown on the plans and included in the estimate have a corresponding section in the special provisions, regardless of payment method.
- Measurement and payment for each item of work is described by the Standard Specifications or special provisions and corresponds with that shown on the plans and estimate.
- Full compensation clauses are properly used and consistent with the estimate and plans.
- Non-standard or extensively edited SSPs are justified and approved by their sponsor.
- Standard or Non-standard special provisions are edited and formatted in conformance with the requirements in the "Specifications Preparation Guide."
- The most up-to-date SSPs are used.
- The terminology in the special provisions is consistent with the estimate and the plans.
- Use of sole source (or patented and proprietary) items are justified and approved by the District Director or the Division Chief, DES, for structure sole-source items.
- Personal names are not used; use the person's title or office.
- Specific years are not referenced except for quoting prices for proprietary items. The year may become obsolete if award is delayed.
- Plan sheet numbers are not referenced in the special provisions, because they may be subsequently renumbered or removed. Rather, use "as shown on the plans."
- Supplemental funds are provided in the estimate when SSPs are included for Partnering, Dispute Resolution Board (DRB), Compensation Adjustments for Price Index Fluctuation, Value Analysis, and /or Damage Claims.

DISTRICT PROPOSED SPECIAL PROVISIONS REVIEW

The SSP Index and Section 6, "Specifications Preparation," are to be used for reviewing the proposed special provisions. Some historically problematic SSPs are discussed in the "Discussion Of Selected Standard Special Provisions" section of Section 6.

5.5 PROJECT ESTIMATE CERTIFICATION

The Project Estimate of Cost is prepared using the instructions in Section 7. Projects having multiple funding sources, including projects with multiple types of State funds, must have a segregated BEES estimate identifying the sources and level of funding. Segregation is to be completed by the districts.

The Estimate should conform to Basic Engineering Estimating System (BEES) Manual, GES 337 course manual, "Beginning BEES," and GES 292 course manual, "Advanced BEES."

The estimate consists of the following components:

- Contract Items
- Supplemental Work Items
- State-Furnished Materials and Expenses
- Contingency

ESTIMATE REVIEW

General guidelines for reviewing the estimate are listed below. Reference materials are available at the DES-OE web site, including the:

- Coded Contract Items List.
- State-Furnished Materials and Expenses List.
- BEES Manual.

Contract Items

See "Contract Items" in Section 7 for general information and instructions. General guidelines for contract item review are:

- All items of work shown on the plans are included in the estimate.
- Estimate is prepared using BEES.
- Contract pay items are specified in the SSPs.
- Item description, unit of measure, and quantity agree with the information shown on the plans.
- Item description and unit of measure must agree with the special provisions and the Standard Specifications.
- Item quantities are rounded correctly.
- Item quantities have only one decimal place. The BEES does allow more than one decimal place, but the Bid Opening system does not.

Non-Standard Items

Non-standard items must comply with the instructions in the section, "Non-Standard Items" of Section 7.

Specialty Items

Items to be designated as specialty items (S) must comply with the criteria in Section 7, "Specialty Items." See Table 7-1 for a list of items generally designated as specialty items.

Final Pay Items

Items to be designated as final pay items (F) must comply with the criteria in Section 7, "Final Pay Items." See Table 7-4 for a list of items generally designated as final pay items.

Additional Review For Selected Contract Items

- Progress Schedule (Critical Path) (Item Code Number 070012) should be included in projects with an estimate cost of \$5 million or more, or 250 or more working days. Exceptions to the criteria are approved only by HQ Division of Construction. Ensure that SSP 08-015 is included in the special provisions.
- Plant Establishment Work (Item Code Number 204099) should be included when there is work specified in SSP 20-550. Ensure that the correct SSP S4-060 is included in the special provisions.

Supplemental Work Items

Supplemental Work items will conform to the requirements established in Section 7. Approval of exceptions must be provided with the PS&E Submittal.

Federal Trainee Program

Items will conform to the criteria in Section 7, "Federal Trainee Program."

State-Furnished Materials

Items to be listed under this component must comply with the criteria in Section 7.

Contingencies

A contingency of 5 percent for unforeseen work necessary to complete the project within scope is automatically calculated and included by the BEES program. Approval from the Chief Engineer is required and to be provided with the PS&E Submittal when a contingency of other than 5 percent is used in the final estimate.

Figure 5-1
Checklist of Minimum Project Requirements for Plans

- Plans conform to drafting standards contained in the Plans Preparation Manual (PPM), Section 2 and were reviewed by district draftsman.
- All plan sheets for PS&E are complete and accounted for. Submit CADD generated sheets with a PS&E CADD Submittal Form. Include a plot file for each sheet file to be plotted.
- Standard 22" x 34" sheet formats are used.
- Standard seals and signatures are on all sheets.
- The title sheet and project title are in conformance with Section 2 of PPM.
- Plan sheet names and identification codes are correct.
- Applicable Revised Standard Plans and New Standard Plans sheets are identified.
- Typical cross sections are representative and sufficient.
- Work shown on plans is complete, biddable and buildable.
- Construction details for items not covered by Standard Plans are sufficient.
- Summaries of quantities are sufficient.
- Drainage profiles are included.
- Specifications or proprietary items are not shown on plans.
- High and low risk facilities are properly identified (Elevations and alignment are shown where required by the "Manual on High and Low Risk Underground Facilities within Highway Rights-of-Way").
- Terminology on plans matches items in estimate.
- Standard abbreviations and symbols are used.
- Stage construction is adequately shown on plans.
- Required Local Agency plans are included, not referenced.

Section 6 Specification Preparation

6.1 PURPOSE

This Section provides guidance on preparing contract special provisions. The contract special provisions incorporate the Standard Specifications, Standard Special Provisions, and contract specific clauses (approved non-standard special provisions).

For the Department's construction personnel, specifications provide a set of procedures for the management and execution of a project. For contractors, specifications provide a written amplification of the information contained on the plans, the specific requirements for measurement of and payment for work performed, and a mechanism to handle situations not contemplated by the contract. Specifications also, together with the plans, provide the information to contractors for developing bids.

The cost of capital support and capital projects increases with variation in the contract special provisions. Variation complicates contract specification application in contracts, risk assessment by contractors in bidding, and contract administration and dispute resolution during construction.

The cost of materials, equipment, and labor is fairly equal for all contractors. In bidding, the only real difference is the amount of risk a contractor is willing to assume. Interpretation of the plans and specifications plays a vital role in assessing risk. With standard specifications the variation is reduced, and the risk is more readily assessed. With customized specifications the opposite is true. Reducing variation will result in lower bids.

6.2 SPECIFICATIONS BUSINESS RULES

The Construction Contract Standards Branch (CCSB) in DES-OE is responsible for establishing business rules to ensure that contracts are worded, formatted, and presented with consistency and without conflict with other standards or policies. These business rules are found in the DES Specification Writers' Style Guide (to be published).

These business rules are developed primarily for consistency and clarity of the Department's contract specifications so that contractors and field engineers know what to expect and how to interpret those specifications. Other reasons are to document due diligence in specification development and to avoid the time-consuming effort to reformat the contract special provisions.

Specifications must be the result of participation and concurrence from the Department's experts to be of the highest quality. In 1993, a Department audit observed that the Department should have a system for documenting the reasons for creating new standards with the concurrence of the Department's experts. The Standard Special Provisions Development Guide was developed to satisfy the audit, and the business rules are extended to the PS&E

submittal by the districts. Deviations from Standard Specifications SSPs or the creation of all-new specifications should be limited and must be documented to ensure that the Department's experts are in agreement. Standard specifications are the result of extensive development. Editing should adhere to the instructions provided and not to the writer's preference.

Documenting the decisions the Department's experts make, or recommend, can be valuable if there is a lawsuit. Government Code Section 830.6 provides for limited liability if designs are prepared in conformance with standards approved by the Department. Districts are responsible for requesting concurrence for project by project deviations from standards in the contract special provisions.

6.3 CONTRACT SPECIAL PROVISIONS

Contract special provisions are an essential part of the contract that are prepared by district and Structure staff. Contract special provisions supplement or supersede the Standard Specifications and complement the contract plans, providing legal, administrative, and technical requirements. This is accomplished by incorporating boilerplate, SSPs, and approved non-standard special provisions (NSSPs). SSPs are the building blocks used to develop contract special provisions.

Districts have overall responsibility for submitting the contract special provisions and ensuring there are no conflicts with Structure or boilerplate specifications.

6.4 ROLES AND RESPONSIBILITIES

DIVISION CHIEF

For NSSPs:

- Designates persons as the owners of the technical content of specifications related to their area of responsibility.
- Advises DES-OE Area Seniors.
- Provides resources to support the owners in their responsibilities.
- Assists DES-OE with organizing and managing district special provisions.

OWNER

For NSSPs:

Concurs with the districts and other owners on NSSPs. Concurrence consists of agreement with an NSSP after reviewing, making recommendations, or assisting the responsible charge engineer to determine the qualifications of an NSSP preparer. **A recommendation of**

acceptability by the owner does not mean the owner assumes responsibility for the NSSP. When providing an NSSP to districts, ensure the NSSP conforms to the business rules for styles and format found in the "Specification Writer's Style Guide" (to be published).

RESPONSIBLE CHARGE ENGINEER

The Responsible Charge Engineer is the person in the district signing the plans and special provisions.

For SSPs:

Ensures SSPs are used and edited in accordance with the SSPs' instructions. **Using SSPs as intended assures the Engineer that the appropriate technical experts (the SSP owners) were involved.**

For NSSPs:

- Ensures NSSPs are developed and included in projects with owners' concurrence.
- Ensures technical specialists review, make recommendations, or assist in determining the technical qualifications of the NSSP preparer.

DOE

For SSPs:

Provides quality assurance that SSPs are used and edited in accordance with the SSPs' instructions.

For NSSPs:

- Drafts NSSPs with district technical experts' input and DES-OE guidance.
- Ensures NSSP language, style, format, and measurement and payment are consistent with the specifications business rules.
- Includes documentation of owner concurrence in the PS&E submittal.
- Includes an explanation for NSSPs in the PS&E submittal.

DOE SITE COORDINATOR

- Acts as liaison between DES-OE and the DOE unit for computer issues.

- Assures that the computers in their district's OE unit are equipped with the tools and configuration necessary to submit PS&E packages that are in compliance with the standards set by DES-OE.
- Is the point of contact in the DOE unit for troubleshooting the computers.
- Responsible for any other computer related function (e.g., annual equipment inventory).

DES-OE, OFFICE OF PS&E AREA SENIOR

For SSPs:

Performs IA on assigned project SSPs.

For NSSPs:

- Assists in determining the appropriate owners to contact for concurrence.
- Performs IA on assigned project NSSPs.

DES-OE, CONSTRUCTION CONTRACT STANDARDS BRANCH (CCSB)

For NSSPs:

- Assists owners in developing NSSPs.
- Provides training on NSSP language, style, format, and measurement and payment.
- Posts a roster of owners on the DES-OE website (additional guidance can be obtained from the DES-OE Area Senior).

6.5 CONTENTS AND ORGANIZATION OF CONTRACT SPECIAL PROVISIONS

Contract special provisions for highway projects are organized as follows:

SECTIONS 1 THROUGH 4

These sections describe:

- Amendments to the Standard Specifications.
- Requirements and instructions to bidders, including DBE/DVBE.
- Project award and execution requirements.
- Beginning of work, working days, and liquidated damages for the project.

Amendments to the Standard Specifications in the contract special provisions are considered part of the Standard Specifications for the purposes of the hierarchy specified in Section 5-1.04 of the Standard Specifications.

Whenever the term "amended to read" is used in the contract special provisions, the text or table following the term is considered an amendment to the Standard Specifications. In case of conflict between amendments and the Standard Specifications, the amendments take precedence over and are used in lieu of the conflicting portions.

Do not edit the amendments section.

Districts provide working day, liquidated damages, and other information in the PS&E submittal. DES-OE completes Sections 1 through 4.

SECTION 5, GENERAL

This section contains supplements to Sections 4 through 9 of the Standard Specifications and is made up of the SSPs designated as the "S5" series.

Do not edit SSPs for Section 5 except as permitted by SSP instructions.

SECTIONS 6 AND 7, BLANK

These sections are left intentionally blank.

SECTION 8, MATERIALS

This section is used to avoid repeating the material specification in many items of work. Section 8 also includes a list of materials that will be furnished by the State to the Contractor for installation on the project, and allowable substitutions of non-metric materials and products for their metric counterparts.

SECTION 9, DESCRIPTION OF BRIDGE WORK

This section is left blank unless there is bridge work within the project. "Description of Bridge Work" is required when facilities designed by DES-SD are included in the project. SOE furnishes this section.

SECTION 10, CONSTRUCTION DETAILS

Section 10 has three sub-sections:

1. Section 10-1, "General," contains special provisions that apply to the project and are typically covered by Sections 10 through 95 of the Standard Specifications.
2. Section 10-2, "Highway Planting and Irrigation Systems," contains special provisions covered by Section 20 of the Standard Specifications.

3. Section 10-3, "Signal, Lighting, and Electrical Systems," contains special provisions covered by Section 86 of the Standard Specifications.

Districts submit combined (highway and structure) Section 10 special provisions.

SECTION 11, BLANK

This section is left blank except to replace an entire section of the Standard Specifications, when applicable.

SECTION 12, BUILDINGS

This section is left blank unless there is building work on the project. SOE furnishes the building work special provisions for projects based on the Standard Specifications.

SECTION 13, RAILROAD RELATIONS AND INSURANCE

This section is left blank unless there is railroad involvement on the project. District Right of Way furnishes special provisions for this section to the DOE.

SECTION 14, FEDERAL REQUIREMENTS

This section is left blank unless federal funding is involved in the project. DES-OE will insert this section.

6.6 ASSEMBLY OF CONTRACT SPECIAL PROVISIONS

Ensure SSPs are current. The SSP naming convention includes a date to quickly determine the most recent version. Consult the DOE Site Coordinator for tools to facilitate assembly.

The following is a suggested procedure for assembling contract special provisions:

STEP 1. REVIEW CURRENT SSPs.

Review the fileserver or Internet (particularly the folder entitled "Updates") and the SSP Index for the most current SSPs.

STEP 2. ASSEMBLE SECTION 10 SSPs.

Begin by assembling contract special provisions for Section 10, "Construction Details". Use the preliminary plans and estimate, including applicable Standard Plans. Do not rely solely on the estimate to assemble contract special provisions; work paid for with another item may be inadvertently omitted, and SSPs tailored to specific situations are not obvious from the estimate. However, the estimate is a good starting point.

Estimate items must be addressed in the special provisions. If a BEES estimate is provided, the first two digits of a standard BEES item code number normally indicate the applicable

SSPs. For example, the BEES item code for asphalt concrete (Type A) is 390102. The first two digits indicate that Section 39 of the Standard Specifications covers this item. Therefore, there will be at least one SSP beginning with "39" in the project.

If a spreadsheet or table of quantities is provided without item code numbers, it may not be as obvious which group of SSPs to consider. Familiarity with the Standard Specifications sections is essential. Use the "find" function in Word to search the Standard Specifications for key words from the quantity list. The SSP Index can also be searched for key words.

Review the plans for specific information about the work. Summary of Quantities sheets are useful, but a thorough review of the entire plan set is needed. Note the characteristics of the work. For example, if the Summary of Quantities sheets indicate roadway excavation, review the rest of the plans (i.e., Layouts, Typical Cross Sections, and Construction Details, etc.), and note where the excavation takes place. Is it widening of the existing roadway? Is there potential for aerially deposited lead? Knowing the characteristics of the work is required for proper selection of SSPs and editing.

Pay attention to work shown that is incidental to, or included in, other work. A method of payment for each portion of the work is needed, but special provisions for materials and performing the work may be needed as well. Including payment for work in another item doesn't exempt specifying the work itself.

Organization is critical. Use a spreadsheet or some other method that identifies:

- The work to be performed.
- Which plans show the work, and which estimate item.
- The applicable section of the Standard Specifications.
- The unique characteristics of the work.
- The methods of measurement and payment.
- The SSPs that will cover the work in the contract.

For each item of work, read the applicable Standard Specifications and SSPs. There may be several SSPs for a Standard Specifications section (e.g., Section 39 has 38 SSPs). Study the SSP paragraphs and their instructions to determine if they apply to the work. The instructions are created to assist in using the SSP, and may indicate other SSPs to add. An asterisk (*) following a paragraph number indicates mandatory editing. The SSPs may also indicate other items to add to the estimate that the designer omitted.

Use or editing of some SSPs cannot be determined unless there is input from the PE or the various specialists within the district. For example, asphalt concrete has many materials possibilities that are determined by the District Materials function. Some specialists will edit

and furnish the applicable SSPs directly (e.g., Landscape, Electrical, and Traffic Operations), and others will communicate the information for editing by the specifications engineer. Regardless, expect to communicate with the specialty functions. Review their specifications for completeness. Sometimes specialty work specifications require the addition of other Section 10 SSPs. For example, signal and lighting poles (Section 86) require certain SSPs from Section 49, "Piling," for foundation work, which may in turn require editing.

If work is not specifically addressed by an SSP, edit a similar SSP or use a non-standard special provision. See "Non-Standard Special Provisions (NSSPs)" in this Section.

Some Section 10 SSPs are for work that is not shown on the plans (e.g., Order of Work). After the contract special provisions are assembled for the work shown on the plans, review the remaining Section 10 SSPs and determine if they are applicable to the project. The SSP Index is an effective tool for this.

Assemble contract special provisions in SSP numerical sequence (e.g., SSP 29-010 before SSP 39-010, and SSP 20-020 before SSP 20-030).

STEP 3. ADD SECTION 11, SSPs, IF APPLICABLE.

This section is reserved for approved re-writes of entire Standard Specifications sections, but which only apply to specific projects (e.g., QC/QA for asphalt concrete). Consult the SSP Index for current Section 11 SSPs.

STEP 4. ASSEMBLE THE SECTION 5, "GENERAL," STANDARD SPECIAL PROVISIONS.

DOE and SOE includes certain Section 5 SSPs that are found in a folder titled "District." Follow the SSP instructions for district Section 5 SSPs for when to use them. Also, some of the Section 10 SSPs will provide instructions to insert certain Section 5 SSPs.

Some projects will require special provisions of a general nature that are not covered by a Section 5 SSP. As with Section 10, edit a similar SSP or use a non-standard special provision.

DES-OE selects and inserts certain Section 5 SSPs after PS&E submittal, determined by the type of funding and the dollar amount. These Section 5 SSPs are found in a folder that indicates DES-OE use. Do not include DES-OE Section 5 SSPs in the special provisions submittal.

STEP 5. ASSEMBLE THE SECTION 8, "MATERIALS," STANDARD SPECIAL PROVISIONS.

Review each Section 8 SSP instruction for use and editing.

STEP 6. INCORPORATE THE SPECIAL PROVISIONS SOE PROVIDES FOR BRIDGE AND BUILDING WORK.

In the contract special provisions, the "Description of Bridge Work" will be Section 9 and "Buildings" will be Section 12; both provided by SOE. There will also be special provisions for Sections 5, 8, and 10 for structure work. Resolve conflicts between the structure, roadway, and specialty special provisions. Do not edit SOE special provisions without consulting with the SOE Specifications Engineer.

STEP 7. INCORPORATE THE SPECIAL PROVISIONS FOR RAILROAD WORK

District Right of Way provides Section 13, "Railroad Relations and Insurance," to the DOE as a separate file for inclusion in the contract special provisions.

STEP 8. REVIEW FOR CROSS-REFERENCES

Review the entire set of assembled contract special provisions for cross-references. A section of the Standard Specifications may refer to another section, that in turn requires an SSP not previously contemplated.

STEP 9. EDIT THE SSPs

Edit the assembled SSPs in accordance with Section 6.19, "Standards for Formatting and Editing Contract Special Provisions," and Section 6.20, "SSP Editing," of this guide. Use the macros provided to indicate edits, showing the initials of the editor, the symbol indicating the editor's function (e.g., *** indicates DES-OE), and blue underline and red strikethrough for additions and deletions, respectively. Do not remove deleted text; use strikethrough. Follow styles, language, and formatting requirements included in this guide. However, do not rewrite SSPs in an attempt to improve them.

6.7 CONTRACT SPECIAL PROVISIONS FOR BUILDING PROJECTS

Building projects with pavement structural section, traffic control, or specialty work are prepared using the Standard Specifications and SSP format. See the memorandum, "Building Projects' Special Provisions," dated May 3, 2002, or see Appendix D, "Websites."

Building projects with little or no roadway or specialty work are prepared using the General Conditions and related format.

Unique building projects are prepared using the format decided between the DOE and SOE. The decision is documented and included in the PS&E submittal information.

6.8 STANDARD SPECIAL PROVISIONS (SSPs)

SSPs have been developed in concert with the Department, industry, FHWA, and other interested stakeholders. The SSP process ensures the Department's experts have concurred

with the SSP, and the SSP is consistent with the Standard Specifications, Standard Plans, State statutes and code, Department policies, and federal regulations.

SSPs cover specific subject matter, and do one or more of the following:

- Define items of work consistent with statewide applications.
- Cite applicable Standard Specifications sections as well as other standard requirements, e.g., ASTM requirements.
- Include approved supplements to the Standard Specifications and exceptions to other requirements.
- Provide legal or contractual requirements brought about by legislation, environmental permits, other agencies, or changing conditions such as water shortages or unpredictable asphalt prices.
- Cover standard items of work not addressed in the Standard Specifications.
- Use SSPs to the greatest extent possible as they:
 - Streamline plans, specifications, and estimate production, thereby reducing time by minimizing design and review.
 - Reduce tort liability, reflecting the consensus of knowledgeable individuals from a broad range of range of functional areas.
 - Ensure competitive bids and provide for efficient contract administration through consistent and uniform contracts statewide.
 - Reduce change orders and claims, using language that reflects agreements between the State, regulatory agencies, and construction industry.

Approximately 750 roadway and structure SSPs and 250 building-related SSPs are published on the HQ OE file server and the Internet. DES-OE notifies the districts when new or revised SSPs are available. The Internet address for accessing SSPs and the Standard Specifications is: http://www.dot.ca.gov/hq/esc/oe/specs_html/index.html. Users outside the Department have access to the SSPs via the Internet only.

USING STANDARD SPECIAL PROVISIONS

Follow the instructions included with the SSPs for using or editing the SSPs. Follow the NSSP process to deviate from the SSP instructions, or to edit existing SSPs beyond the instructions.

Some SSPs do not have specific instructions for their use or instructions for editing paragraphs. Edit to fit project conditions if the unedited SSPs might confuse or mislead bidders. In general, but with a few exceptions, delete references to materials, application, installation, construction, or measurement and payment of items of work not relevant to the project. Do not edit SSPs to rewrite text in an attempt to improve it.

Except as provided above, do not edit SSPs because SSPs have been tried and have been proven to be successful, and the SSPs are often the result of a legal requirement or an agreement between the State and the industry.

6.9 NON-STANDARD SPECIAL PROVISIONS (NSSPs)

An NSSP is a special provision used in situations when the standards do not adequately cover the work.

NSSP PROCESS (DISTRICT INITIATED)

Step 1. Validate Development of an NSSP

Before developing an NSSP, the initiator will confirm with the DOE that an NSSP is needed.

Step 2. Plan Development of an NSSP

Begin the NSSP development and concurrence process early. Plan a strategy with the district functional personnel for developing the NSSP and coordinating with the owners.

Unapproved NSSPs submitted with the project may delay project RTL.

Step 3. Draft the NSSP

Use existing SSPs and the "Specifications Writer's Style Guide" (to be published) to draft the NSSP. Request the DOE review for format, style, and language. Districts are responsible for a properly formatted NSSP, if initiated by the district.

Develop a concise explanation of the purpose and need for the NSSP. This will assist the reviewers to understand the NSSP and will expedite review.

Step 4. Request Review and Owner Concurrence

Discuss the NSSP with the DES-OE Office of PS&E Area Senior to determine or confirm the affected owners to contact. There may be more than one owner involved with an NSSP, and occasionally the Department's Legal Division or FHWA (for full oversight projects) should be contacted.

The district counterparts to the affected owners should be in agreement with the proposed NSSP, and their names should be provided to the affected owners. Since owners work closely with their counterparts in the districts, consider requesting district functional personnel to handle the coordination. Who concurred with what version (memos, e-mails, etc.) should be clearly documented.

Allow at least two weeks for a response from the owner. Send a reminder after 7 to 10 days if the owner is unresponsive. If after the two weeks there is no response, document that the reminder was given (include a copy of the reminder with the PS&E submittal), and assume concurrence.

Step 5. Submit to DES-OE with PS&E

Check the field in the PS&E Cover Memorandum noting that NSSPs are included in the project. The DOE inserts the NSSP in the contract special provisions, and submits documentation of concurrence from the owners with an explanation for the NSSP. There is not a standard format for this documentation.

Note that DES-OE will not grant a project Ready-to-List status that contains NSSPs not concurred with by the owners.

NSSP PROCESS (OWNER INITIATED)

Step 1. Validate Development of an NSSP

Before developing an NSSP, the initiator will confirm with CCSB that an NSSP is appropriate.

Step 2. Initiate Development of an NSSP

An SSP should be developed when consistency throughout the State is desired. Since NSSP concurrence must be documented with every PS&E, it is more efficient to develop an SSP. One example of when an NSSP is desirable is when the specifications must be extensively tailored to meet special conditions from district to district.

Step 3. Draft the NSSP

Use existing SSPs and the "Specifications Writer's Style Guide" (to be published) to draft the NSSP. Request DES-OE CCSB assistance for format, style, and language. Owners are responsible for a properly formatted NSSP, if initiated by the owner.

Develop a concise explanation of the purpose and need for the NSSP. This will assist the owner in understanding the NSSP and will expedite review.

Step 4. Request Review and Owner Concurrence

Discuss the NSSP with DES-OE, CCSB, who will help determine the necessary owners to contact. There may be more than one owner involved with an NSSP and occasionally Legal Division or FHWA should be contacted. Allow at least two weeks for a response from the owner. Send a reminder after 7 to 10 days if the owner is unresponsive. If after two weeks there is no response, document that the reminder was given, in case a question is raised, and assume concurrence.

Step 5. Provide NSSP to Districts

Include an easy-to-document statement that the NSSP is approved for a specific project. For owner-initiated NSSPs, the owner is responsible for ensuring the formatting and styles are in conformance with the business rules established by DES-OE, CCSB.

STYLE, FORMAT, AND LANGUAGE OF NSSPs

The style of NSSPs should generally conform to that of the Standard Specifications and the SSPs. Use the business rules found in the "Specification Writer's Style Guide" (to be published). Consider using an existing SSP as a template to ensure proper styles and format.

Use the following outline:

1. Description of the work.
2. Materials specifications.
3. The specific results of installation or construction. The special provisions should specify what is required, not how to accomplish it. Method provisions limit the contractor's options to do the work and also may increase the Department's responsibility for the work. However, undesirable methods may be forbidden or restricted.
4. The method of measurement and payment. Follow the formats in "Standard Clauses" of this guide.

DISTRICT SPECIAL PROVISIONS

District special provisions are NSSPs approved for use on a district-wide basis and are limited to situations where the standards do not adequately address a district's needs. District special provisions can reduce review and preparation time because the district will not have to approach the owner on a project-by-project basis. Coordinate the concurrence for district special provisions with the designated owners and the DES-OE Office of PS&E Area Senior before use in PS&Es.

Obtain the appropriate owner's concurrence through the following process:

1. The DOE submits the district special provision to the appropriate owner and DES-OE, Office of PS&E Area Senior, with justification for its use.
2. The owner will either concur with or deny the request.
3. The DES-OE, Office of PS&E Area Senior reviews the district special provision to ensure style, format, and language consistency and, if agreed to by the owner, directs staff to include in the district's contracts. The DES-OE, Office of PS&E Area Senior will maintain a copy of the district special provision to ensure consistent use.

LOCAL AGENCY STANDARD SPECIFICATIONS

Do not refer to local agency standard specifications for contract work. Local agencies often use different methods for measurement and payment in their work. Convert applicable local agency specifications into the Department's SSP style, format, and language, including measurement and payment.

6.10 DISCUSSION OF SELECTED STANDARD SPECIAL PROVISIONS

Due to the number of SSPs on file, it is impractical to discuss them all in this Guide. Most SSPs contain instructions for use and, in general, do not require discussion.

SELECTED SECTION 4, CONTRACT SPECIAL PROVISIONS

The district provides the appropriate special Section 4 SSP (if different from the Standard Section 4), number of working days and the amount of liquidated damages to be used in the contract special provisions. Include this information in the PS&E Cover Memorandum.

Standard Section 4 (SSP S4-010)

Standard Section 4 of the contract special provisions:

- Provides that the Contractor shall start work within 15 calendar days after the approval of the contract.
- Specifies the number of working days allowed to complete the contract work.
- Specifies the liquidated damages to be assessed from the Contractor for not completing the work on time.

A+B Bidding and Incentive/Disincentive Provisions

Districts are to use A+B Bidding or Incentive/Disincentive (I/D) provisions by following guidelines developed and approved for their use. Refer to the published guidelines by Division of Construction which can be accessed at this website: <http://pd.dot.ca.gov/construction/contractmanagement/ABMEMO.pdf>. In general, the

selection criteria are an estimate of \$5 million or more and daily road user delay cost of at least \$5,000. However, there are other criteria that will exclude some projects. DES-OE will provide the appropriate paragraphs in Section 3 and Section 4 of the contract special provisions (these clauses are found in SSP S2-011).

Working Days

The district has the primary responsibility for setting construction time limits, and incorporates the SOE Estimator's time estimate. Failure to incorporate this time estimate from SOE may affect the bid prices substantially. Under special circumstances, time limits less than the working days required for normal work shifts may be necessary. Use clauses in SSP S4-020. If a change to the definition of a working day is needed, use the wording in "Standard Clauses" of this Guide.

Consider the following when determining the number of working days:

- Consecutive days are not used for work that could be performed concurrently.
- No time allowance is made for work paid for as extra work. Additional days, if any, will be written into a CCO.
- Storm Water Pollution Prevention Plan (SWPPP) approval time.
- 7 or 14 day waiting period before placement of pavement markers on new asphalt concrete.
- Curing time for concrete when it cannot be concurrent with the controlling item of work.
- 30 days minimum for obtaining railroad insurance.
- 14 days to determine bitumen ratio of asphalt concrete.
- Any time specified for performance of utility work.
- Highway planting, irrigation, and plant establishment; coordinate this work with the PE and the Landscape Architect in the district.
- Collection of "site specific seed" specified for erosion control work.
- Plant material that must be propagated from plants on the project site.
- Scheduled project start delays to clear previous contracts from Right of Way.

- Review and approval of contractor submittals (for example, material lists, working drawings and plans, and other items specified in the special provisions or Standard Specifications).
- 35 days for approval of equivalent material or article when "trade names" are used. See Section 6-1.05 of Standard Specifications.
- 90 or more days to obtain mast arm type signal and lighting standards or overhead sign structures.
- Special work day or time constraints. Days that "Maintaining Traffic" of the special provisions will affect working days as defined in Section 8-1.06 of the Standard Specifications, or as redefined in the special provisions.
- Material shortages. Provide lead-time to obtain materials.
- "Show-up time" is not included in the working days. Working day calendars normally start 15 calendar days after approval of contract.
- Working days are usually rounded up to the nearest 5 days.

Liquidated Damages

Liquidated Damages recover additional State costs due to the Contractor's failure to complete the contract within the specified time and are based on the estimated cost of field construction engineering. In special cases, specify liquidated damages greater than the estimated field construction engineering cost and provide detailed reasons to support the greater amount. In every case, calculations should support the recommended rate. Do not use Liquidated Damages as disincentives or incentives to encourage timely completion.

Use the following formula for highway construction projects to avoid excessive liquidated damages:

$$\frac{(\text{L\% (see Table below)} \times \text{Engineer's Estimate (Contract Items)}) + \text{Estimate of RE Office Expenses}}{\text{Working Days (exclude Plant Establishment Working Days)}}$$

Table 6-1
Liquidated Damages Factor (L%)

Total Project Cost	Resurface/ Rehabilitation	New Highway	Realignment/ Widening	Land-scaping	Sound -wall	Others
<\$750k	15%	20%	20%	18%	20%	15%
\$750k-5M	15%	15%	15%	18%	18%	15%
\$5-10M	10%	15%	15%	15%	15%	15%
\$10-30M	10%	12%	15%	15%	15%	15%
> \$30 M	10%	10%	13%	15%	15%	15%

Round up the calculated liquidated damages for all projects in \$100 increments to determine the Liquidated Damages to be specified.

Internal Time Limits

Except in special cases, avoid use of internal time limits. They can be a source of significant conflict during construction. However, consider specifying an internal time limit if the State will incur a liability to others for work completed late.

In projects where there is an identifiable cost to the State if a particular item of work is not completed on schedule (such as lost bridge tolls, back-charges from a railroad for train delays, or costs to construct a detour if the work item is not completed on time), specify an internal time limit with a separate assessment in Section 4 of the special provisions. Base the amount of assessment on the actual costs or loss of revenue to the State. Likewise, if there is an identifiable saving to the State if a project or a particular item of work is completed in less time than specified, include additional payment (incentives).

In projects which require early completion of a particular portion of the work for which the State does NOT incur liability if the particular portion is not completed on time, specify in the "Order of Work" section of the special provisions that the critical element be completed before other contract work is started. The "Order of Work" clause may permit other work to proceed concurrently.

Example:

Construction of _____ shall be the first order of work. Non-conflicting work may proceed concurrently with the construction of _____ provided progress is maintained adequately to assure completion of _____ within _____ working days after approval of the contract. In the event satisfactory progress is not maintained, the Engineer may order suspension of the non-conflicting work.

For work where the internal time limit applies to a portion of a contract item, add the clauses to the SSP for the work involved. This will ensure a subcontractor doing the

particular work is aware of the time limit because the subcontractor may not be concerned with the "Order of Work" section.

When two contracts are closely coupled, even with the above clause in one contract, it may be necessary to put special cooperation or work-around clauses in the special provisions for the other contract.

Provide backup data to justify requests for internal time limits, separate pay deductions for delay, or additional payments for early completion.

Do not specify a date to complete the work. The Contractor cannot control contract award, and subsequently, the beginning of work. These uncertainties may make it impossible to complete a project by a specified date.

Delayed Starting Time, Section 4 (SSP S4-030)

The standard "Delayed Starting Time" Section 4 allows the Contractor to start work later than what is normally allowed after approval of the contract for certain types of projects. These projects include:

- Projects consisting of specialized work where a large number of similar projects are being advertised within a short time period.
- Projects with a very limited number of working days.
- Building projects.
- Projects where difficulty is anticipated, or time is needed, for the procurement of materials.
- Projects with conflicting construction in the same vicinity.

This SSP permits work to begin with more flexibility to fit the Contractor's work schedule. Since the start of work is flexible, the Department needs more time to schedule the Resident Engineer's forces. Therefore, the five-day notification before starting work is included in the SSP.

Section 4 for Electrical Projects (SSPs S4-040, 050)

For projects requiring specially fabricated materials or equipment, such as electrical or mechanical materials and equipment, two special Section 4 SSPs give the Contractor a delayed starting time option.

SSP S4-040 requires the Contractor to furnish the Engineer with a vendor's statement that the vendor has received and accepted the order for the special materials and equipment that the contract requires. The Contractor shall furnish this statement within 15 calendar

days after approval of the contract. The Contractor may do this instead of beginning work within 15 days, as provided in Section 8-1.03, "Beginning of Work," of the Standard Specifications. This form includes the anticipated "fabrication and delivery" time in the working days allowed and lets the Contractor start work any time, installing conduit and constructing foundations while waiting for the ordered signal and lighting standards, potentially prolonging work.

SSP S4-050 also requires a vendor's statement, but the working days specified include the time to order and obtain all the materials. This SSP is used when materials are readily available.

Section 4 for Projects with Plant Establishment Work (SSP S4-060)

Projects with Plant Establishment Work require a special Section 4. Each type of plant establishment requires a different method to determine total working days, as follows:

- **Type 1 Plant Establishment** shall be specified for Highway Planting projects. A Type 1 plant establishment period begins at the completion of all roadway, planting, and irrigation construction work. Total working days on a project with a Type 1 Plant Establishment is equal to the sum of planting and irrigation working days and Plant Establishment days.
- **Type 2 Plant Establishment** shall be specified for highway construction projects with plant establishment work. A Type 2 plant establishment period begins when the Resident Engineer determines construction activity is complete enough to begin plant establishment. Plant Establishment work may be performed while roadway construction is in progress, allowing the Contractor to complete work earlier and reduce costs. The expected number of working days for plant establishment remaining after the roadway construction work is complete is added to the roadway working days and inserted into the appropriate location in the SSP. Total working days on a project with Type 2 Plant Establishment is equal to, or less than, the sum of construction working days and Plant Establishment days.

The total working days for construction projects with planting work must be sufficient to include highway planting, irrigation, and plant establishment work.

Do not edit the Liquidated Damages amount for exceeding the combined working days once the project is in the plant establishment period (currently \$600 per day).

Water Availability Clause (SSP S4-070)

Use the special water availability clause when the district has determined that water may become unavailable during the contract period due to drought conditions. This SSP provides that the Department will consider unavailability of water as a "shortage of materials" and will pay delay costs in the same manner as Right of Way delays. If it is apparent that water will be unavailable for a prolonged period, these provisions do not

preclude suspension or termination of the contract. Projects for which the district is aware that water is currently unavailable will not be advertised until water is available.

"Dollar Job" Section 4 (SSP S4-080, 090)

These Section 4 SSPs are used for "Dollar Jobs" which are typically State-funded maintenance and seal coat projects. Division of Maintenance maintains an annual list of these projects. Projects not on the list should not include the "dollar job" Section 4 SSPs.

"Dollar Job" projects are awarded at the end of a fiscal year, when the bid opening, contract award, and approval phase will overlap July 1, and passage of a new State budget is in question. They allow the Department to award a contract in the current fiscal year, and delay the start of work until the next fiscal year pending budget passage. They also give the Contractor the option of terminating the contract if the budget does not pass by a certain date.

SELECTED SECTION 5, CONTRACT SPECIAL PROVISIONS

Different combinations of Section 5 SSPs are inserted into the boilerplate depending on funding and goals.

Damage Claims (SSP S5-200)

This SSP is included in seal coat projects when screenings will be applied. It should not be edited except when AC or other work is involved. Change "contract bid price" in the sixth paragraph to "value of the seal coat items" when work other than seal coat is involved.

Compensation Adjustments for Price Index Fluctuations (SSP S5-232)

There are three SSPs for compensating the Contractor for price fluctuations of asphalt during a contract. Instructions for calculating the compensation are provided in the SSPs. The calculation is based on using the estimated amount of asphalt and the published monthly California Statewide Asphalt Price Index. The district should insert the data for its calculation in the blanks of the SSP instructions so that the calculation may be verified. There should be no adjustment to the formula for metric units. A conversion factor will not yield more accuracy due to the relative uncertainty of the actual asphalt price.

Areas for Contractor's Use (SSP S5-240)

This SSP informs contractors of the availability of State-owned parcels or areas for their use. Districts should ensure that areas specified are cleared through the environmental process, and permits are obtained.

Payments (SSP S5-250)

This SSP is used in all projects and limits payment for items completed early in construction. Rules for use include:

- Items must be paid for by the lump sum.
- The work must be performed in the early stages of the project.
- The dollar amount specified must be the same as shown in the BEES Estimate.

Limit payment for early lump sum items regardless of the number of working days in the project. Since the purpose of limiting payment for these items is to discourage unbalanced bids, districts should consider opportunities to add items to the list.

Partial Payments (SSP S5-250)

SSP S5-250 also provides for partial payment to the Contractor for materials on hand. See Table 6-2 for the list of items that qualify for partial payments.

The State Contract Act and the Standard Specifications allow the Department to make progress payments for materials furnished by the Contractor but not yet incorporated in the work. Some materials may be in short supply; others may require custom fabrication for the project. Having materials on hand when they are needed may avoid delays in the project. Payment for material on hand encourages Contractors to obtain hard-to-get materials early in the life of the project. Contractors can purchase the materials early yet still recover the use of working capital. Districts should be prepared to verify the materials are purchased for the project, and not other work. If possible, the materials should be stored on the project site to prevent those materials from being used on other projects.

If an item is split into two items, one for "furnish" and one for "construct" (or place, erect, etc.), the "furnish" item should be the item listed in the special provisions for partial payment for materials on hand.

In order to qualify for partial payments for materials on hand, a project must:

1. Have 90 or more working days (excluding plant establishment time).
2. Have a total cost for contract items exceeding \$100,000.

If the above project criteria are met, allow partial payments for materials following these general rules:

- If the Engineer's Estimate is less than \$1,000,000, each item or group listed must have a material value of \$1000 or more.

- If the Engineer's Estimate is greater than \$1,000,000, each item or group listed must have a material value of \$5000 or more.
- Group similar items (for example, culvert pipes and appurtenances) to meet the material value criterion.
- Items that qualify for partial payment are listed in Table 6-2.
- Include items that have to be custom-fabricated, even if the items aren't listed in Table 6-2.
- Include only high value items that are anticipated to be purchased by the Contractor well before incorporating the materials in the work.

Project Information (SSP S5-280)

The contracting industry has expressed concerns that bidders do not know if bidder information is available for a project and where to obtain that information. In order to improve the process of providing and distributing the project information to the potential bidders, SSP S5-280 has been developed. This SSP discloses to bidders the locations where project-related data and information is available. It is used in all projects except projects where there is no data or information available.

Relations With Various Agencies (SSPs S5-620, -630, -640)

The SSPs identifying involvement with California State Parks, California Department of Fish and Game, California Regional Water Quality Control Board, and the California State Reclamation Board are used to alert the Contractor to general requirements when projects fall under those various jurisdictions. Specific requirements contained in their agreements or permits should be included in the various construction item SSPs, or in the "Order of Work" section. These SSPs can be edited to suit the project requirements since it would be impractical to create separate SSPs for the possible agencies and entities that could be involved with a project.

A copy of the agreements or permits is provided with the PS&E submittal and identified in SSP S5-280, "Project Information."

Aerially Deposited Lead (SSP S5-740)

This SSP is used in District 4, 6, 7, 8, 10, 11, and 12 projects with soil containing aerially deposited lead from vehicle emissions and subject to the conditions of the Variance between the Department and the California Department of Toxic Substances Control. Since it is tied to the Variance, editing of this SSP beyond the instructions is strictly subject to concurrence from Headquarters Environmental.

Environmental testing of the project must be completed and areas of contamination defined before PS&E.

This SSP is not used for projects with minor soil disturbance where the disturbed material can remain within the area of disturbance. Use SSP 07-330 for minor soil disturbance. When SSP S5-740 is used, also use SSP 19-900.

Environmentally Sensitive Area (SSP S5-760)

This SSP is used in when areas of existing vegetation, archeological sites, or other environmentally sensitive areas must be protected. Use with SSPs 07-446, "Temporary Fence (Type ESA)," and 05-020, "Order of Work."

SELECTED SECTION 8, CONTRACT SPECIAL PROVISIONS

Prequalified and Tested Signing and Delineation Materials (SSP S8-M03)

The Department maintains a list of prequalified and tested signing and delineation material. This SSP is updated periodically to add and delete items from the list.

Signing and delineation products are not to be used unless they appear on the approved list. This requirement does not apply to standard wood and metal posts, or other items conforming to the requirements of the Standard Specifications.

State-Furnished Materials (SSPs S8-M10, -M15)

State-furnished materials are materials the Contractor will use in performing planned, permanent work where it has been determined to be in the taxpayer's best interest for the State to furnish.

The district identifies State-furnished materials based on pre-approved list. See "State-Furnished Materials and Expenses" in Section 7 for the list of materials that FHWA has pre-approved for federal participation. If an item does not appear on the list, include with the PS&E submittal a justification for why the item should be eligible for federal participation. Use PIF documentation/support (i.e., sole source, patented/proprietary, etc.) to justify why the material cannot be a separate bid item and/or included as part of an existing item.

Following are the general rules for specifying State-furnished materials:

- Treat material furnished by a local agency as "State-furnished."
- If material is listed in the SSP as State-furnished, the contract special provisions or Standard Specifications must identify where the State-furnished material is to be used. Specify in the contract special provisions if State-furnished material is to be hauled to the project by the Contractor.

- If the contract special provisions or Standard Specifications indicate that a material for permanent work will be State-furnished, list the material in the SSP.
- If State-furnished materials are used in temporary work (such as detours or traffic control) do not include the materials in this SSP. However, specify the materials in the Section 10 special provisions as State-furnished.
- Include State-furnished materials in the BEES estimate under "State Furnished Materials and Expenses."
- When the materials for an item of work are State-furnished, the actual work to be performed by the Contractor is to "install" or "construct" the item. Use these terms in the item description, and the Engineer's Estimate.
- Except for those items listed in Section 7, do not list items as State-furnished in the SSP unless justified and approved by Headquarters Construction.

Portland Cement Concrete (PCC)(SSP S8-C01)

Use this SSP in all projects, even those without PCC items. SSP S8-C01 modifies Section 90, "Portland Cement Concrete," of the Standard Specifications. Most projects will use PCC in some form.

Freezing Condition Requirements (SSP S8-C05)

Use this SSP in projects located in severe climate areas when major concrete structures are to be constructed. Climate areas are shown in Table 6-3. This SSP is sometimes used when major concrete work is to be constructed in moderate climate areas.

Major concrete work includes:

- Bridges.
- Box culverts.
- Other structures critical to public safety such as retaining walls.
- Concrete pavement.
- Concrete approach slabs.

The first paragraph is not used when the only concrete work involved is:

- Not critical to public safety such as minor structures.
- Sidewalks.

- Low in monetary value.
- Easily replaced.
- Minor concrete structures or deck restoration work with other concrete work.

Welding (SSPs S8-W04, -W05, and -W06)

Use SSP S8-W04 when any welding may be performed on the project. The SSP provides important welding specifications and modifies AWS welding codes for the Department's projects. For welding on structures, including footings and pile foundations for sign structures and signals, lighting and electrical systems, use the provisions for welding quality control.

Add SSP S8-W05 when the project includes work conforming to Section 56-1, "Overhead Sign Structures," or Section 86-2.04, "Standards, Steel Pedestals, and Posts," of the Standard Specifications.

SSP S8-W06 is for payment.

SELECTED SECTION 10-1 (GENERAL), CONTRACT SPECIAL PROVISIONS

Construction Project Information Signs (SSP 05-000)

This SSP is included in all projects (except seal coat and resurfacing projects) with an estimated contract cost of \$750,000 or more and 50 working days or more. This is not a construction area sign (CAS) and does not conform to CAS or roadside signs, therefore the post size or any other details must not be indicated or shown on the project plans. Standard Plan T7 is to be included on the Standard Plans List SSP.

Order of Work (SSPs 05-010, -020, -030, -050, -060, -080, -100, -150, -200, -500)

The Order of Work section is used to provide specifications on important sequential activities. Order of Work is often used to detail steps taken to ensure the safety of the traveling public, or to convey traffic handling requirements. Sometimes Order of Work is used for materials not commonly kept in suppliers' inventories, which must be ordered immediately to ensure their availability before the contract expires. Order of Work clauses should only be used where a specific sequence or a critical time period is necessary.

It is not appropriate to automatically add "Attention is directed to..." clauses in Order of Work when an SSP provides a sequence for constructing an item, or for submitting a plan or certificate of compliance before the work of that item can proceed. These requirements should be contained in the SSP for the item, and "Attention is directed" in Order of Work is not needed.

It is appropriate to add specifications to Order of Work when completion of one item affects another item, or other work (e.g., a seal coat operation, where it is required to reference existing striping patterns before obliteration so that new pavement delineation can be placed in the correct locations. See SSP 05-060.) Order of Work functions as an obvious place in the contract where important sequential requirements between items or operations are specified.

If a portion of the project needs to be completed at the beginning of the contract, designate that portion of work as "the first order of work," and state:

- that other work may proceed concurrently provided that the Contractor maintains satisfactory progress in the first order of work, or,
- that the Contractor must complete the first order of work before starting other work.

See "Internal Time Limits" of this Section for an example of the preferred wording.

Water Pollution Control (SSPs 07-340, -345)

Water pollution control applies not only to the work included in the project but also to the Contractor's operations and their effects on adjacent streams.

Use SSP 07-340 for projects with soil disturbance less than 0.4 hectares (1 acre). The SSP requires the Contractor to develop a Water Pollution Control for approval. The SSP includes a cost breakdown to be completed by the Contractor for the lump sum item of water pollution control. Include items in the cost breakdown that may be applicable to the project, according to the Construction BMPs Manual, and delete the non-applicable items. The Contractor will complete the cost breakdown. However, include an estimated quantity in the cost breakdown for items that are Project Specific Minimum Requirements. Do not include in the cost breakdown items that are paid for with separate contract items. There will be lump sum items for both "Prepare Water Pollution Control Plan" and "Water Pollution Control."

Use SSP 07-345 for projects with soil disturbance greater than 0.4 hectares. The SSP requires the Contractor to prepare a Storm Water Pollution Prevention Plan (SWPPP) for approval. SSP 07-345 also requires a cost breakdown with similar guidelines as SSP 07-340. However, SSP 07-345 requires sampling and analysis of storm water runoff. Sampling and Analysis Requirements will be paid for as extra work, and a supplemental work item will be required. Also, lump sum items for prepare storm water pollution prevention plan and water pollution control are required.

"Prepare Water Pollution Control Plan" and "Prepare Storm Water Pollution Prevention Plan" are good items to include in SSP S5-250, "Payments." Contact the Water Pollution Control program in Division of Design for guidance on estimating these early lump sum items.

Temporary Best Management Practices for Water Pollution Control (SSPs 07-4XX)

These SSPs are provided to make elements of water pollution control separate items. Although they will be elements of the Contractor's SWPPP, they will be administered independently from the water pollution control item in SSP 07-345. Do not list temporary Best Management Practices administered as separate items in the cost breakdowns for water pollution control.

These items are unique because only the construction details, and not the locations, are required to be shown on the plans. The Contractor will determine the locations as part of the SWPPP. The item price will not be adjusted if exceeded in the field.

Cooperation (SSP 07-850)

This SSP is included when cooperation is required. The Contractor must be informed with whom or what the cooperation is all about. For example: "Contract xx-123456 will be in progress during the life of this contract" or "A contract to _____ will be in progress during the life of the contract" or "It is anticipated that contract xx-123456, on Sac 99 from K.P. 1.5 to K.P. 16.5, to widen the freeway, will be in progress during a portion of this contract."

Progress Schedule (Critical Path Method) (SSPs 08-010, -012, -015)

Use these SSPs according to the dollar amount and working days criteria in the instructions. SSP 08-010 is always used for planting projects, regardless of the dollar amount.

Time-Related Overhead (SSPs 08-017, -018)

The time-related overhead SSP uses a bid item, based upon competitive bidding, for the compensation of field and home office overhead. The SSP is used in projects exceeding \$5 million. Exceptions to this criterion require approval from Division of Construction. The item for time-related overhead is estimated as either working days (excluding plant establishment working days), or a lump sum item for contracts utilizing A+B specifications. It is important to use the correct version of time-related overhead.

Memoranda from Division of Design have been issued for guidance on estimating the unit or lump sum price for time-related overhead.

Obstructions (SSPs 08-020, -025, -026, -027, and -030)

Use SSP 08-020 as the lead SSP in this series when underground utilities are on the project. Depending on electrical conduit trenching work, SSPs 08-025 or 08-026 are added when underground utilities are not located on the plans, and must be exposed by the utility owner. SSP 08-027 is used when utilities will be relocated during construction,

along with SSP 08-030 that tells the Contractor how compensation for delays will be handled.

Specifications for exceptions to the policy on High and Low Risk Underground Utilities are added to SSP 08-020 with the concurrence of the SSP owner, the Division of Design.

Mobilization (SSPs 11-010, -015)

Include SSP 11-010 when the number of working days on the project exceeds 50 (excluding plant establishment working days). SSP 11-010 may be included in contracts consisting primarily of bridge work, regardless of working days. Deviation of the working day requirement must be approved by the Division of Construction.

SSP 11-015 is used for warranty projects.

Construction Area Traffic Control Devices (SSP 12-000)

This SSP is used in all projects.

Miscellaneous Clauses for Falsework Openings and Falsework Lighting (SSP 12-030)

When this SSP is used, ensure the falsework opening indicated is the same for the district and structure.

Construction Area Signs (SSPs 12-003, 12-230)

Do not use these SSPs together. SSP 12-230 is for bridge cleaning and painting projects, but should not be used when SSP 12-003 is used.

Traffic Control System for Lane Closure (SSPs 12-260, -265, -270, -275, and -280)

These SSPs are used when stationary and moving lane closures are on the project, consistent with the standard plans. Read the SSP instructions carefully to determine which SSP is applicable to the number of lanes and type of project (e.g., seal coat projects). Instructions on the SSPs must be followed. Deviations from the standards must be approved by HQ Division of Traffic.

When flaggers are required, funds must be added to supplemental work to cover the Department's share.

When lane closure charts are required, use SSPs 12-130, 12-132, and 12-134.

Temporary Pavement Delineation (SSPs 12-310, -312, and -320)

These SSPs vary depending on the length of time the temporary pavement delineation will be in place. Careful attention to the SSP instructions is necessary to ensure the correct SSP is used.

Temporary Railing (SSP 12-410)

This SSP is used for temporary railing (Type K), which should not be confused with the permanent Type K railing specified in SSP 83-480.

Temporary railing (Type K) is mentioned in "Public Safety" of the boilerplate special provisions, and is sometimes required when conditions dictate. However, unlike temporary crash cushion modules, it is only necessary to add SSP 12-410 when there is a contract item for temporary railing (Type K). This is because the Standard Specifications, the Standard Plans, and "Public Safety" of the special provisions adequately cover the item.

Temporary Crash Cushion Modules (SSP 12-990)

This SSP is included in all projects regardless of whether there is an item for Temporary Crash Cushion Modules or not. SSP S5-060, "Public Safety," included with the boilerplate, refers to "Temporary Crash Cushions" of the special provisions.

Existing Highway Facilities (SSPs 15-XXX)

This series of SSPs will not be discussed in detail in this guide; however, the following basic comments may help to prepare this portion of the contract special provisions. See Table 6-4 for the general definitions of existing highway facilities work. Use SSP 15-010 as the lead SSP when there is work on existing highway facilities on the project.

Salvage

When the Contractor is to salvage existing facilities, describe the destination of the salvaged material. Do not refer to existing facilities to be salvaged as "Remove and Salvage" but as just "Salvage." In general, use the SSPs for "Remove" existing facilities for "Salvage" items by changing the word "remove" to "salvage" and deleting the reference to disposal. Do not designate as "salvage" existing facilities that are to be reconstructed or otherwise reused in the work. On Highway Planting projects, do not show "salvage" on the plans. Salvaged materials are listed in the "Remove Existing Irrigation Facilities" SSP.

Reconstruction

A project may require that the Contractor remove existing facilities (such as fence and guardrail) that are in satisfactory condition and that conform to the requirements for a new facility to be constructed on the same project. Contractors are not necessarily concerned with resource conservation. Therefore, rather than give the Contractor the option of disposing of the removed facility and purchasing new materials to construct the new facility, specify that the Contractor is to use the removed facility in the new work. This will avoid waste and needless use of new materials.

Removal

In general, do not specify the method of removing existing highway facilities. If the Department specifies a method, then the State may become partially responsible for damage done to the highway or to the public. The contract special provisions can, however, forbid or restrict the use of undesirable methods.

The last two paragraphs in Section 15-2.07, "Payment," of the Standard Specifications act, in essence, as a "fail safe" to pay or compensate the Contractor for removing existing highway facilities (except concrete) that are not being paid for separately by a contract item or included in another item of work. These paragraphs provide for removal work overlooked in the design phase, removal work of little cost, or removal of existing facilities that do not require a separate operation, such as dike removal in an excavation area. Note that if there is no item for clearing and grubbing and no item for excavation, the removal will be paid for under Section 15-2.07 as extra work - not always an economical way to pay for work that can be bid.

If a sign panel is to be relocated on a new post, the work should be considered new work under Section 56 of the Standard Specifications, "roadside sign-one post" or "roadside sign-two post," as the case may be. Select the appropriate SSP to cover removal of the sign, with a provision that the Contractor is to reuse the sign panel as shown on the plans.

Move-In/Move-Out (Erosion Control) (SSP 20-020)

Recommended for use together with SSP 07-345 on large projects with significant earthwork that will extend through at least one rainy season. Use when the intent is to have the Contractor apply the erosion control right after "substantial completion" of embankments and excavations. Refer to the SSP instructions to determine the number of move-in/move-outs. A paragraph in Order of Work is also recommended.

Erosion Control (SSPs 20-030 and 20-040)

Use these SSPs when the district landscape architect determines that permanent vegetation can be established through hydroseeding and placement of straw. Materials for this work will need to be added as items to the estimate.

Finishing Roadway (SSP 22-010)

This SSP is only used when there is a pay item for "finishing roadway." If there is not an item, finishing the roadway will be included in the prices paid for the various items of work.

Warranty (SSPs 37-810 through 37-855, SSP 39-485, and SSPs 39-810 through 39-850)

These SSPs are used when a project has been approved for the warranty pilot program. For seal coat warranty projects, contact Division of Maintenance. For asphalt concrete warranty projects, contact METS, Statewide Pavement Design.

Quality Control/Quality Assurance (QC/QA) (SSPs 39-050, -052, -054, -056, -057)

SSPs for QC/QA are used on all projects with at least 10,000 tonnes of asphalt concrete (Types A or B, 12.5-mm or 19-mm) and the asphalt concrete will be placed in a single, relatively continuous process within a limited location on the mainlines.

SSP 39-052 is a complete replacement of Section 39 of the Standard Specifications for QC/QA projects. It is inserted in the project as Section 11.

Asphalt Concrete Aggregate Treatments (SSPs 39-200 and 39-210)

Use of SSPs for Lime Treatment (SSP 39-200) and Liquid Anti-Strip (SSP 39-210) requires a recommendation from the District Materials Engineer.

Replace Asphalt Concrete Surfacing (SSP 39-300)

This SSP is used when the existing AC and underlying base is being removed and replaced with new AC. The location and dimensions must be shown on the plans. The item's price includes asphalt concrete, and no separate item for AC is needed.

Concrete Pavement (SSPs 40-010, -011, -015, -020)

SSPs 40-010 and 40-011 are for new PCC pavement with or without dowels to transfer loads across weakened plane joints. SSP 40-015 is for retrofitting existing concrete pavement at weakened plane joints with dowels. SSP 40-020 is for replacing slabs with rapid setting concrete.

Working days estimates should consider the following:

- All four of the SSPs require a prepaving or preconstruction conference.
- SSPs 40-010 and 40-020 require Just-In-Time-Training.
- SSPs 40-010, 40-015, and 40-020 require a test strip or trial slab.
- SSPs 40-010, 40-011, and 40-020 require the Contractor to design the concrete pavement mix.

Recommendations from METS and District Materials Engineers are needed for joint seal type selection.

Grind or Groove Existing Concrete Pavement (SSPs 42-010, -050, -055)

These SSPs require a location for disposal of grinding or grooving residue in the "Materials Information."

Piling (SSPs 49-210, -310, and -400)

Aside from their normal applications, these SSPs are also needed when sign structures, signal and lighting standards, and soundwalls are supported by cast-in-drilled-hole concrete pile foundations.

Alternative Pipe (SSP 62-010)

The list of allowable alternative pipes must be shown on the plans, preferably on the drainage quantity sheet.

Miscellaneous Facilities (SSP 70-010)

This SSP covers the items specified in the first paragraph of Section 70-1.01, "Description," of the Standard Specifications. The items applicable to the project are to be filled out in the special provisions. Many concrete items specified in this SSP may be designated as minor concrete, minor structure, or both, as determined by the designer. See discussion below.

Miscellaneous Concrete Construction (SSP 73-010)

This SSP covers the items specified in the first paragraph of Section 73-1.01, "Description," of the Standard Specifications. The items applicable to the project are to be filled out in the special provisions. The concrete items specified in this SSP are designated as minor concrete, with modifications. See discussion below.

Minor Concrete and Minor Structure

"Minor concrete" is a less restrictive type concrete than the types designated by "Class." Minor concrete normally contains not less than 325 kilograms of Portland Cement per cubic meter and is usually used to construct concrete items of a minor nature, such as drainage inlets, small headwalls, sidewalks, and curbs. Minor concrete does not require testing by the Engineer (but can be tested). Not all of the requirements for concrete in Section 90 of the Standard Specifications apply to minor concrete. Only Section 90-10, "Minor Concrete," and its references to other portions of Section 90 apply.

The term "minor structure" in parentheses following the class of concrete or minor concrete designates that payment for that concrete includes compensation for reinforcement, excavation, and backfill required to construct the concrete item. Minor structures are to be identified on the Drainage Profiles, Drainage Details Sheets, and in the Drainage Quantities Table.

Thermoplastic/Paint Traffic Stripes and Pavement Markings (SSPs 84-050 and 84-100)

These SSPs are edited when only one of the materials is used.

SELECTED SECTION 10-2 (PLANTING), CONTRACT SPECIAL PROVISIONS

Section 10-2, "Highway Planting and Irrigation System," is usually prepared by the District Landscape Architect. However, when the district submits a highway planting project or a road project with planting, the DOE should review Section 10-2 for consistency and completeness.

Highway planting special provisions typically include the following:

Highway Planting and Irrigation System (SSP 20-200)

This SSP is used when there is a Section 10-2 for landscape work. The primary reference to Section 20 of the Standard Specifications is in this SSP.

Cost Breakdown (SSP 20-201 or 20-202)

This SSP is a table of the planting and irrigation items used on highway construction projects. When this SSP is used lump sum pay items for "Irrigation Systems" and "Highway Planting" will be required on the Estimate.

Maintain Existing Planted Areas (SSP 20-252)

This SSP is required when the Contractor has to maintain the planted areas on the project. Maintenance work begins on the first day of construction.

Existing Highway Irrigation Facilities (SSP 20-300)

This is a lead SSP for the protection and modification of the existing irrigation facilities on highway construction projects.

Check and Test Existing Irrigation Facilities (SSP 20-304)

This SSP will be used to determine the condition of the existing system whenever it will be modified or potentially damaged by the highway construction activities.

Highway Planting (SSP 20-350)

This SSP is to be used for the installation of plants on a highway construction contract.

Roadside Clearing (SSP-20-400)

This SSP is to be used to clear the roadside of trash and weeds just before the installation of the irrigation and plants. Do not confuse with "Clearing and Grubbing" which is removal of all vegetation at the beginning of the project.

Plant Establishment Work (SSP 20-550)

Use this SSP if a period of time is needed after installation of the plants to ensure the irrigation system remains in working order, and the plants are growing and healthy.

The Standard Specifications (Section 20-4.08, "Plant Establishment Work") provide for two types of plant establishment periods, each having a different effect on the total working days for a project. SSP 20-550 provides for the selection of one of these two types of plant establishment periods. The types of plant establishment periods are as follows:

- **Type 1 plant establishment period** requires the Contractor to complete the work of the project (highway planting, irrigation, and road work) before starting the plant establishment period. Upon completion of the highway planting, irrigation, and roadwork, the roadway can be open to public traffic during the plant establishment period. Since Type 1 plant establishment cannot start until roadwork is completed, it increases the total number of working days for a project. Type 1 should not be used on roadway construction projects.
- **Type 2 plant establishment period** requires the Contractor to complete highway planting and irrigation system work before starting the plant establishment work. Type 2 plant establishment work can be performed while other roadwork operations are in progress. The roadwork, highway planting, irrigation system work and plant establishment work shall be completed on or before the number of working days specified in the special provisions. Generally, Type 2 should be used only on roadway construction projects.

To determine which type of plant establishment to specify, evaluate the preliminary progress schedule. Show the scheduling of all highway planting and irrigation system work, including plant establishment, in relation to the road work.

Irrigation Systems (SSP 20-600)

This is the lead SSP for the installation of irrigation equipment on the highway.

Booster Pump (SSP 20-990)

This SSP is a separate numbered subsection after Irrigation Systems. This SSP is edited by SOE.

SELECTED SECTION 10-3, (ELECTRICAL) CONTRACT SPECIAL PROVISIONS

Special provisions for electrical projects have to be compiled and edited on a project-by-project basis. These special provisions are organized in different categories and types for (electrical) contracts throughout the State, varying from a simple lighting system to a complex communication system.

Over half the electrical projects include NSSPs or modified SSPs. These NSSPs and modified SSPs either have been used previously or modified to meet the needs of a project. SSPs for fiber optics system, closed circuit television (CCTV) camera system, video image detection system (VIDS), roadside weather information system (RWIS), highway advisory radio (HAR), weigh-in-motion (WIM) system are just a few examples of these types of projects. Contact the appropriate owner in headquarters to obtain approval.

The SSP selection from the approved SSP list in the server may vary depending on the type and complexity of the electrical system installation. A list of the most commonly used approved SSPs in PS&E Packages include the following:

Traffic Signal System

SSP 86-010, SSP 86-015, SSP 86-030, SSP 86-070, SSP 86-080, SSP 86-130, SSP 86-140, SSP 86-150, SSP 86-170, SSP 86-190, SSP 86-340 SSP 86-380, SSP 86-400, SSP 86-420, SSP 86-470.

Lighting System

SSP 86-010, SSP 86-070, SSP 86-130, SSP 86-140, SSP 86-150, SSP 86-170, SSP 86-190, SSP 86-240, SSP 86-470.

Loop Detector Replacement

SSP 86-010, SSP 86-130(if new termination conduit is needed), SSP 86-150, SSP 86-170, SSP 86-420, SSP 86-790.

Ramp Metering System

SSP 86-010, SSP 86-015, SSP 86-030, SSP 86-070, SSP 86-080, SSP 86-130, SSP 86-140, SSP 86-150, SSP 86-170, SSP 86-190, SSP 86-340 SSP 86-380, SSP 86-400, SSP 86-420, SSP 86-540.

Irrigation System

SSP 86-010, SSP 86-030, SSP 86-130, SSP 86-140, SSP 86-150, SSP 86-170, SSP 86-190, SSP 86-199, SSP 86-350.

Signal, Lighting, and Electrical Systems (SSP 86-010)

This SSP must be included in all projects that have a permanent electrical installation.

Maintaining Existing and Temporary Electrical Systems (SSP 86-030)

This SSP must be included when lane closures or restrictions may interfere with the operation of an electrical system on the project. Ensure that there will be no conflict between the lane closure charts and the time restrictions in this SSP.

Foundations and Standards, Steel Pedestal, and Posts (SSPs 86-070, SSP 86-080)

These SSPs must be included in projects when foundations and poles are required. Ensure the SSPs mentioned in the instructions are edited appropriately with the assistance of a Civil Engineer from the district or SOE.

Conduit (SSP 86-130)

This SSP should be included in the majority of projects. Very few projects do not require conduit installation, e.g., loop and pull box replacement.

Conductors and Wiring (SSP 86-150)

This SSP should be included in the majority of projects.

Bonding and Grounding (SSP 86-170)

This SSP must be included in all projects with electrical work.

Service (SSP 86-190)

This SSP should be included in projects with new service installation. Modification of an existing electrical service will not require this SSP. In projects with irrigation systems, add SSP 86-199, "Electrical Service (Irrigation)," following SSP 86-190.

State-Furnished Controller Assemblies (SSP 86-340)

This SSP must be included in projects where a Model 170 controller is necessary for the operation of a signal, ramp meter, or changeable message system. Ensure the Model 170 controller is included in the SSP S8-M03.

Irrigation Controller Enclosure Cabinet (SSP 86-350)

This SSP must be included in projects with new irrigation controller installation. Ensure that the landscape department has the appropriate edits (dimensions, color and equipment) for this SSP.

Detectors (SSP 86-420)

This SSP must be included in projects with loop detectors. The district must decide the type of loop wire and sealant used for the installation.

Luminaires (SSP 86-470)

This SSP should to be included in projects with lighting.

Removing, Reinstalling, or Salvaging Electrical Equipment (SSP 86-740)

This SSP must be included in all projects where there is material shown on the plans to be salvaged. Provide the maintenance yard address as part of the editing to this SSP.

Payment (SSP 86-790)

This SSP must be included in projects where there are no payment provisions under Section 86-8, "Payment," of the Standard Specifications.

6.11 GENERAL SPECIFICATION LANGUAGE

GENERAL

Harold J. Rosen, PE, writes in his book, Construction Specifications Writing, "A good specification is one containing the fewest words that can be used to complete the description and make sense."

Good specification writing demands a simplified writing style, and a style that provides the writer's exact meaning, leaving no room for interpretation. In theory, this style may seem relatively easy to achieve. In practice, writing in this style requires consistent attention to organization, format, and grammar. In order to produce well-written specifications, it is essential to understand the basic requirements of specifications and the language necessary to convey these requirements in a concise, clear, complete, and correct manner. Use the business rules found in the "Specification Writer's Style Guide" (to be published) for writing specifications.

Use the simplest language that says clearly and accurately what needs to be said. Avoid jargon, contorted wording, and pseudo-legalisms. Use terms with legal meanings only on advice from counsel. Use terminology already in the Standard Specifications as a guide for consistency, but consider that preferred language and phrases may necessarily have changed from when it was published in the Standard Specifications.

Conflicts may arise when requirements are repeated. Avoid repeating specifications in the General Provisions (Sections 1-9 of the Standard Specifications) in the contract special provisions. Similarly, if providing information on the plans, avoid repeating it in the specifications.

When writing specifications, the following can be useful:

- Remember the Five "Cs" (Concise, Clear, Complete, Correct, and Consistent).
- Draft an outline and determine what is required in each part of the specification format (description, materials, construction, measurement, and payment).
- Do your homework. Research the technical parts of the specification.

- Review the General Provisions for already established abbreviations, definitions, and scheduling and payment requirements.
- Avoid cutting and pasting from old, out-of-date specifications.
- Use a peer review.
- Edit and revise:
 - Read the specification backward to check for spelling errors. Use a spell check program, but remember it is not fool-proof.
 - Read the specification to yourself aloud, and listen for its clarity.
 - Consider using an editor, not necessarily with an engineering background, to edit the specification.

6.12 STANDARD CLAUSES

The following are standard, commonly used, or special clauses and phrases that should be used for consistency.

MEASUREMENT AND PAYMENT CLAUSES

A method of measurement and payment must be provided for all work shown on the plans and specified in the special provisions. It is particularly important that measurement and payment clauses be used clearly and consistently. Measurement and payment are very sensitive because they deal directly with the most adversarial subject between the Contractor and the Department. The Contractor is in business for profit and the Department is the steward of the taxpayers' money. Ambiguity and error in measurement and payment clauses will certainly lead to disagreement and dispute.

The Standard Specifications and Standard Special Provisions provide a method of measurement and payment for most items of work. Full justification must be provided in the PS&E submittal for deviations from the method of measurement and payment provided in the Standard Specifications or Standard Special Provisions.

The Contractor is entitled to fair payment for work done. The plans and special provisions should furnish sufficient information for the Contractor to bid the job.

The special provisions cover payment by the following methods:

CONTRACT ITEM PAY CLAUSE

The contract item pay clause is used to cover payment for a contract item of work not covered in the Standard Specifications or SSPs and is worded as follows:

The contract price ❶ paid per ❷ for ❸ shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in ❹, complete in place, including ❺ as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

- ❶ "Lump sum" if item is lump sum. "Unit" if item is each. No entry for other measurements (cubic meter, meter, etc.).
- ❷ For example: cubic meter, meter. No entry if lump sum or each and delete the word "per."
- ❸ Exact wording of the contract item used in the Engineer's Estimate.
- ❹ Description of work (contract item wording is usually sufficient).
- ❺ Special or unusual work or work that is normally paid for separately but is to be included in this contract item (Note: Also used to exclude work). Do not include incidental work or work that is described in the special provision. This part of the pay clause is primarily to distinguish that work normally paid for separately is included in the item.

MODIFIED CONTRACT ITEM PAY CLAUSE

Use the following modified clause when a contract item is to be measured and paid for in the same manner specified for a similar item in the Standard Specifications:

❶ will be measured and paid for ❷ in the same manner specified for ❸ in Section ❹ of the Standard Specifications.

- ❶ Exact wording of the contract item.
- ❷ On a lump sum basis, by the cubic meter, etc. If "lump sum" is used, delete the words, "measured and."
- ❸ Exact wording of the similar Standard Specifications item.

- ④ Standard Specifications Section, which provides payment for the item listed in ③. (Include section number and title).

FULL COMPENSATION PAY CLAUSE

Use the full compensation clause to include compensation for work in another contract item instead of making a separate contract item. It may also be appropriate to use a full compensation clause for very unusual work where inclusion or separate payment is not obvious. The correct wording is:

Full compensation for ① shall be considered as included in the contract ② price paid per ③ for ④ and no ⑤ therefor.

- ① The work that is not to be paid for separately.
- ② "Lump sum" if item is lump sum. "Unit" if item is each. No entry for other measurements.
- ③ Cubic meter, meter, etc. No entry if lump sum or each and delete the word "per."
- ④ Exact wording of the contract item that is to include compensation for work listed in ①. Should be the related contract item or in the "items of work involved" when the work is not necessarily tied to one item.
- ⑤ Use the phrase "separate payment will be made" if the work listed in ① is usually a separate contract item. Use the phrase "additional compensation will be allowed" when ⑤ does not apply.

Note that payment is "made" (it is something the Department "does") and compensation is "allowed" (something the Department agrees to). Payment will be monetary, but compensation may not be. "Allowing payment" or "making compensation" is not acceptable terminology. Therefore:

- Do not use "separate payment will be allowed."
- Do not use "additional compensation will be made."

The full compensation pay clause should include compensation for the work in one contract item if practical. If this is not possible, include compensation in the "contract items of work involved."

Do not use the full compensation clause to cover minor or incidental work. Minor or incidental work is already covered by the contract item pay clause.

Do not use a full compensation clause and a contract item pay clause together. The contract item pay clause has a portion that reads "...including..." which should be used to cover the requirements of the intended full compensation clause.

Always include a full compensation clause when work that is normally paid for separately, e.g., excavation or reinforcement, is to be included in an item covered by Standard Specifications.

Do not use a full compensation clause to hide major work in another item. Do not include an item of work that has a higher estimated value in an item of lesser value. (Example: Do not full compensate a \$1000 item in a \$500 item.)

Full compensation clauses should be placed in the SSP where the item of work is measured and paid.

Full compensation pay clauses are useful in eliminating nuisance items (items which have a small value), but should be used with judgment and restraint for the following reasons:

- Full compensation pay clauses make it difficult to adjust the price of the contract item or items in cases of increases or decreases that exceed 25 percent.
- Full compensation pay clauses result in misleading data being used to calculate the cost summaries published in the "Contract Cost Data" Book.
- Inequitable payments may occur in the case of underruns and overruns within the 25 percent allowable.

The State does not save money by including the cost of one item in another. On the contrary, the net cost increases because the contractor will not be paid for the work on a unit basis but will have to estimate the work to be done.

When work to be fully compensated doesn't fall into one item, use the phrase "included in the various items of work" when the work applies to the entire contract, or "included in the contract items of work involved" when there is more than one specific item involving the work. For consistency, do not use "...the various items of work involved..." or "...the various contract items of work..."

TRANSFER PAY CLAUSE

Use this type of pay clause to pay for the quantity of one item of work as another contract item. The correct wording for a transfer pay clause is:

❶ will be measured and paid for as ❷.

❶ Item of work that is paid for as the contract item listed in ❷.

❷ Exact wording of the contract item.

A common error is to use a full compensation pay clause when a transfer pay clause is the correct pay clause to use.

EXTRA WORK PAY CLAUSE

Generally, include payment for planned or anticipated work in the contract items. Pay for work of unforeseeable extent or necessity as extra work. If Extra Work is being considered as Supplemental Work, see Section 7.

Do not include in the special provisions detailed specifications for work classified as extra work, except the pay clause. Special provisions that will not be bid on will only create confusion. A contract change order will specify the work.

If there could be doubt in the bidder's mind of how a portion of the work is to be paid for, define in the special provisions the work classified as extra work. Use this wording:

❶ will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

❶ The work to be paid for as extra work.

THE "NO ADJUSTMENT" CLAUSE

Sometimes it is advantageous to exclude certain items from the provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications. This section describes how a contract item price will be adjusted when the actual quantity exceeds or falls short of the estimated quantity by over 25 percent. However, while effective to protect the State and Contractor, the calculation can be cumbersome.

Use the "No Adjustment" clause when the quantity is relatively small when compared to typical quantities for the material, and there is a history of deviations from the estimate in the field (e.g., aggregate base for bridge approach slabs). This clause may also be used when there is not a significant difference in the cost of performing the work (i.e., labor and equipment) with a large increase or decrease in quantity. For example, paint binder (tack coat) or fog seal coat is typically applied from a tank truck in a continuous operation. If the actual quantity exceeds the estimated quantity (tonnes), the only real difference is the quantity of material. However, quantities that are underestimated may cause an unbalanced bid. The equipment and labor are on the job for basically the same amount of time.

Provide approval from Headquarters Division of Construction for new items using the "No Adjustment" clause and fully justify adding items you consider essential.

If adjustable and non-adjustable items in the Preliminary Estimate are combined, remember to specify in the Contract special provisions that the normally non-adjustable item is to be made adjustable.

Use the following language for no adjustment pay clauses:

No adjustment of compensation will be made for increases or decreases in the quantities of **1**, regardless of the reason for the increase or decrease. The provisions of Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications shall not apply to the item of **1**.

1 Exact wording of the contract item.

WORDING FOR DISPOSAL OF MATERIALS

_____ shall be disposed of in conformance with the provisions in Section 7-1.13, "Disposal of Materials Outside the Highway Right of Way," of the Standard Specifications.

WORDING FOR CERTIFICATE OF COMPLIANCE

A Certificate of Compliance for _____ shall be furnished to the Engineer in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications.

WORDING FOR COMPENSATING DELAYS CAUSED BY THE ENGINEER'S REVIEW TIME

(Use when a time frame has been specified for the Department's review or approval of a Contractor's submittal.)

In the event the Engineer fails to complete the review within the time allowed, and if, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of the Engineer's delay in completing the review, the Contractor will be compensated for resulting losses, and an extension of time will be granted, in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

WORDING FOR CHANGING WORKING DAYS DEFINITION

Use requires Division of Construction approval. (Use when Saturday, Sunday, and legal holidays will be considered as working days with exceptions allowed for inclement weather and when Maintaining Traffic prevents the controlling operation from proceeding.)

Subparagraph (a) of the second paragraph in Section 8-1.06, "Time of Completion," of the Standard Specifications shall not apply to this project.

(Use when every day will be considered a working day with no exceptions. Check the special provisions to be sure there are no days specified as non-working days.)

The second through fifth paragraphs, inclusive, of Section 8-1.06, "Time of Completion," of the Standard Specifications shall not apply to this project. A working day is defined as any day, with no exceptions.

WORDING FOR SPECIFYING OTHER RESPONSIBILITIES ARE NOT WAIVED

Nothing in this section will relieve the Contractor of the Contractor's responsibilities as specified in Section "_____", of the Standard Specifications.

or

_____ shall not relieve the Contractor of the responsibility for _____.

WORDING FOR REFERRING TO THE INTERNET OR A URL ADDRESS

The _____ is available at the following Internet address:

http://www._____.

6.13 PREFERENCE FOR MATERIALS (SOLE SOURCE)

The term "sole source" as used in this section includes proprietary items, and brand or trade names.

If only one product meets the requirements of the special provisions or if the product is available from only one producer, the special provisions for that product is considered a sole source special provision. This type of special provision is governed by the "Preference for Material" policy as established by Public Contract Code Section 3400. Except for

architectural building work, sole source items should not be used in the special provisions unless approved by the District Director or District Deputy Director, Design. Include this approval in the PS&E Submittal.

POLICY FOR USING SOLE SOURCE ITEMS (HIGHWAY PROJECTS)

Do not use sole source items unless it is entirely impractical to furnish functional special provisions for a product or material. Do not use special provisions that would limit the bidding, directly or indirectly, to one specific material or product.

Sole source items may be used if:

- There is no other known material or product of equal or better quality that will perform the same function.
- Other agencies request a product or material by trade name to preserve uniformity with existing installations.
- Color reference is needed for multicolored tile.
- The sole source material or product is being used on an experimental basis with a clearly written plan for follow up and evaluation.
- It is in the best interest of the public to use a sole source item.

Public Contract Code Section 3400 states that where the use of sole source items is absolutely necessary, include, in the special provisions, the trade names of at least two known materials or products, followed by the words "or equal." However, in unique cases, the use of one trade name can be justified. If materials or products are known to be manufactured in California that will meet the requirements of the work, it is required to list those materials or products. Projects with federal funding require three trade names, or approval is required.

Where the use of only one trade name can be justified, the name must be followed with the words "or equal" as noted above. An exception to using "or equal" is where a documented engineering decision was made that only one known type of material or product fits the field conditions or will function as desired. The district must also furnish a quotation from the manufacturer or supplier of the product or material, signed by a responsible official, giving the name and address of the firm which will sell the product or material, the price, the place of delivery, and agreement to sell to any Contractor. The district must also specify the time span for which the price has been quoted and whether the price includes sales tax. This information will be included in the Contract special provisions.

APPROVAL TO USE SOLE SOURCE ITEMS (HIGHWAY PROJECTS)

Use of sole source items must have prior written approval as listed below. Sole source items incorporated in current, approved SSPs have had prior written approval.

Requests for use of sole source for roadway items must include justification for their use and the approval of the District Director, or if specifically delegated, the District Deputy Director, Design.

Requests for use of sole source for structure items must be approved by the Chief, DES.

Federally funded projects must have FHWA approval if less than three sole source items for a product or material are specified. A PIF must be submitted to the Department's Federal Resources Office, Division of Budgets, to obtain approval before submitting the PS&E to DES-OE. No advance PIF approval is needed when three or more sole source items are used.

If the sole source item is to be used experimentally, and the project has federal participation, submit the PIF to the Department's Federal Resources Office, Division of Budgets, for processing. PIFs for full federal oversight projects will be forwarded for FHWA approval to the Chief, State Project Development Procedures and Quality Branch. The request must include a work plan that indicates specific functional managers and units assigned responsibility to objectively follow-up, evaluate, and document the effectiveness of the sole source item. See "Construction-Evaluated Research" in the Construction Manual for further details on the work plan and approval procedure.

Include copies of correspondence documenting consideration and approvals of the use of sole source items with the PS&E submittal, and submit them separately to the Division of Local Assistance.

The DES Materials Engineering and Testing Services (METS) and the Design and Local Assistance District Coordinator can provide technical help with designs that use new materials, methods, and products.

POLICY AND APPROVAL FOR TRADE NAMES (BUILDING TYPE PROJECTS)

For architectural building type work, use functional specifications (such as Federal Standards or ANSI) whenever they are available. Also, use functional specifications whenever they can be developed without excessive cost and can be worded so that the specifications are easily understood by general building contractors.

Use sole source items only when no other options are feasible; otherwise the State may be accused of favoritism.

Sole source items may be used without prior approval when the following conditions are met:

- Functional specifications are not available and cannot be reasonably developed.
- The product is a standard off-the-shelf manufactured item that is sold by several competing firms.

- At least two trade names are cited (three for federally funded work) including all known acceptable products manufactured in California, followed by the words "or equal."
- The sole source item is not an unreasonably expensive item as determined by DES-OE.

If it is impossible to furnish more than one trade name, follow the procedures required for use of one trade name for highway projects.

In some cases, specifications that avoid the use of sole source can be used.

Example:

"Enamel for washroom walls and ceilings shall be the top of the line grade of enamel manufactured for such use by a paint manufacturer who has been engaged in manufacturing paints to meet custom specifications for at least 15 years."

For architectural building type projects, follow the policy and approval for sole source items on highway projects when the conditions stated above cannot be met.

6.14 RAILROAD INVOLVEMENT

There will usually be railroad involvement when work is to be performed in the railroad right of way, on an overhead, or on another structure over the railroad right of way. There may be railroad involvement even if an item is as small as attaching guard railing to the abutment of an underpass, jacking a pipe beneath the railroad roadbed, or entering railroad property for access to the work or to construct a fence.

If there is a railroad shown on the Title Sheet of the project plans, contact District Right of Way for confirmation as to whether or not there is railroad involvement. This contact should be made as soon as possible - railroad agreements take considerable time to prepare.

District Right of Way will normally furnish the information to complete Section 13 of the special provisions before PS&E submittal.

District Right of Way usually provides an electronic copy of the railroad clauses. Include an electronic copy of the railroad clauses as supplemental documents to the PS&E submittal if they are available when the PS&E is submitted to DES-OE.

Railroad clauses are allowed to be in non-metric units.

6.15 ALTERNATIVE MATERIALS AND CONSTRUCTION METHODS

It is the policy of the Department to allow optional materials and construction methods whenever feasible. In some cases it may also be necessary to include alternative bidding when the payment of the item involved is changed because of the alternative, e.g., steel bridge

versus concrete bridge or different types of seal coats. Some SSPs include alternatives and therefore are not to be amended to reflect personal opinions.

6.16 ITEMS ELIGIBLE FOR PARTIAL PAYMENTS FOR MATERIALS ON HAND

Table 6-2
Items Eligible for Partial Payments for Materials on Hand

Item No.	Eligible Item
19----	Earth Retaining System
19----	Soil Nail Assemblies
20----	Irrigation Controllers
20----	Field Units and Base Station
20----	Irrigation Controller Enclosure Cabinets
20----	Pipe (Irrigation Systems)
20----	Backflow Preventers
20----	Backflow Preventer Assembly Enclosures
20----	Sprinklers
20----	Valves
20----	Welded Steel Pipe Conduit
20----	Corrugated Steel Pipe Conduit
2095--	Irrigation Pump and Equipment
	Irrigation Booster Pumps
39----	Pavement Reinforcing Fabric
	Prestressing Steel for Post-Tensioned Member - including Anchor Plates and Ducts*
40----	Pavement Dowels
49----	Piling (except CIDH Piling)
50----	Prestressing
50----	Tiedown Anchors
50----	Tieback Anchors
51----	Precast Concrete Members
51----	PTFE and PTFE Spherical Bearings
51----	Sound Wall (Masonry Block, Precast Concrete, Panels)
519---	Type B Joint Seals and Joint Seal Assemblies
5201--	Bar Reinforcing Steel
5501--	Structural Steel
55----	Column Casings

Item No.	Eligible Item
5570--	Crib Wall Members
56----	Metal Sign Structures (including Changeable Message Sign Structure)
57----	Timber
62- to 66-	Culvert Pipe
67----	Structural Plate Installations
68----	Underdrain Pipe
68----	Edge Drain Pipe
68----	Filter Fabric
68----	Horizontal Drain Pipe
69----	Overside Drains and Appurtenances
70----	Miscellaneous Drainage Facilities
70----	Welded Steel Pipe
7110-- to 7180-	Sewer Pipes and Appurtenances
72---	Rock Slope Protection Fabric
7405--	Drainage Pumping Equipment
74----	Pumping Plant Equipment
7410--	Pumping Plant Electrical Equipment
7500--	Miscellaneous Iron and Steel
7505--	Miscellaneous Metal
75----	Pumping Plant Metal Work
75----	Isolation Casings
75----	Miscellaneous Bridge Metal
80----	Fences and Gates
832--- to 8330--	Railings
839---	Barriers (except concrete barriers)
83----	Crash Cushions
8501--	Pavement Markers

Item No.	Eligible Item
86--- to 8690--	Lighting Fixtures Luminaires Signal and Lighting Standards Signal Heads and Mounting Brackets Irrigation Controller Enclosure Cabinets Camera Assemblies Signal Cabinets Twisted Pair Cable Splice Vaults Fiber Optic Cable Innerducts Fiber Optic Conduit
* Criteria for including prestressing steel in partial payments are: <ul style="list-style-type: none"> • Project is 120 days or longer. • Such prestressed structures have an estimated value exceeding \$500,000. • Material is listed as: "Prestressing steel for cast-in-place members (sealed packages only)" and "prestressing ducts and anchorages." 	

6.17 CLIMATE AREAS

To define variations in special provisions and details needed to suit conditions of traffic and exposure, the State is divided into three types of climate (environmental) areas:

AREA I

Mild climate, where frost is rare, or where, because of light traffic volumes, de-icing chemicals are applied infrequently. Areas not designated Areas II or III are Area I.

AREA II

Moderate climate, where frost or light freezing occurs, but tire chains are seldom used. Salting of bridge decks is done only in rare or emergency instances.

AREA III

Severe climate, where freeze-thaw cycles and heavy salting occur frequently and where tire chains are used.

**Table 6-3
Climate Areas**

Dist	Route	County	Area I			Area II			Area III		
			Begin PM		End PM	Begin PM		End PM	Begin PM		End PM
1	36	Hum	0.0		25.0		—		25.0		47.9
1	36	Tri		—			—			All	
1	101	DN	2.6		12.5		—		0.0		2.6
			22.5		46.5		—		12.5		22.5
1	101	Hum	0.0		128.0		—		128.0		135.0
1	101	Men	65.0		83.0	0.0		65.0	83.0		100.0
			100.0		104.2						
1	162	Men		—			All			—	
1	199	DN	0.0		15.0		—		15.0		36.4
1	208	Men	0.0		6.0		—		6.0		14.7
1	299	Hum	0.0		14.3		—		14.3		34.1
2	3	Sis		—			—			All	
2	3	Tri		—			—			All	
2	5	Sis		—			—			All	
2	5	Sha		—		0.0		15.4	15.4		65.6
2	5	Teh		—			All			—	
2	32	Teh		—			—			All	
2	36	Tri		—			—			All	
2	36	Sha	8.7		12.0		—		0.0		8.7
2	36	Teh	70.0		73.0	0.0		70.0	73.0		104.0
2	36	Las		—			—			All	
2	36	Plu		—			—			All	
2	44	Sha		—			—			All	
2	44	Las		—			—			All	
2	49	Plu		—			—			All	
2	70	Las		—			—			All	
2	70	Plu		—			—			All	
2	89	Plu		—			—			All	
2	89	Sha		—			—			All	
2	89	Sis		—			—			All	
2	89	Teh		—			—			All	
2	96	Sis		—			—			All	

Dist	Route	County	Area I			Area II			Area III		
			Begin PM		End PM	Begin PM		End PM	Begin PM		End PM
2	97	Sis		—			—			All	
2	99	Teh		—			All			—	
	139	Las		—			—			All	
	139	Mod		—			—			All	
	139	Sis		—			—			All	
	147	Las		—			—			All	
	147	Plu		—			—			All	
	151	Sha		—			—			All	
	161	Sis		—			—			All	
	172	Teh		—			—			All	
	273	Sha		—		0.0		16.1	16.1		20.0
2	299	Las		—			—			All	
2	299	Mod		—			—			All	
2	299	Sha		—			—			All	
2	299	Tri		—			—			All	
2	395	Las		—			—			All	
2	395	Mod		—			—			All	
3	5	Col		—			All			—	
3	5	Gle		—			All			—	
3	5	Sac		—			All			—	
3	5	Yol		—			All			—	
3	16	Sac		—			All			—	
3	16	Yol		—			All			—	
3	20	Col		—			All			—	
3	20	Nev		—			—			All	
3	20	Sut		—			All			—	
3	20	Yub		—			All			—	
3	28	Pla		—			—			All	
3	32	But		—			All			—	
3	32	Gle		—			All			—	
3	45	Gle		—			All			—	
3	49	ED		—			—			All	
3	49	Nev		—			—			All	
3	49	Pla		—			—			All	

Dist	Route	County	Area I			Area II			Area III		
			Begin PM		End PM	Begin PM		End PM	Begin PM		End PM
3	49	Sie		—			—			All	
3	49	Yub		—			—			All	
3	50	ED		—		0.0		15.0	15.0		80.4
3	50	Sac		—			All			—	
3	65	Pla		—			All			—	
3	65	Sac		—			All			—	
3	65	Yub		—			All			—	
3	70	But		—		0.0		20.5	20.5		25.3
3	70	Sut		—			All			—	
3	70	Yub		—			All			—	
3	80	Nev		—			—			All	
3	80	Pla		—		0.0		17.5	17.5		69.8
3	80	Sac		—			All			—	
3	80	Sie		—			—			All	
3	80	Yol		—			All			—	
3	89	ED		—			—			All	
3	89	Nev		—			—			All	
3	89	Pla		—			—			All	
3	89	Sie		—			—			All	
3	99	But		—			All			—	
3	99	Sac		—			All			—	
3	99	Sut		—			All			—	
3	104	Sac		—			All			—	
3	113	Sut		—			All			—	
3	113	Yol		—			All			—	
3	149	But		—			All			—	
3	160	Sac		—			All			—	
3	162	But		—			All			—	
3	162	Gle	0.0		37.6	37.6		84.6		—	
3	174	Nev		—			—			All	
3	174	Pla		—			—			All	
3	193	ED	0.0		13.0		—		13.0		27.0
3	267	Nev		—			—			All	
3	267	Pla		—			—			All	

Dist	Route	County	Area I			Area II			Area III		
			Begin PM		End PM	Begin PM		End PM	Begin PM		End PM
3	275	Yol		—			All			—	
4	1	SCr	0.0		13.6	13.6		17.5		—	
			17.5		37.5		—			—	
4	17	SCr	7.0		13.9	0.0		7.0		—	
4	17	SCr		—			All			—	
4	101	Son	0.0		3.6	3.6		56.2		—	
5	All	All		All			—			—	
6	5	Fre		—			All			—	
6	5	Ker		—		10.0		87.0	0.0		10.0
6	5	Kin		—			All			—	
6	33	Fre		—			All			—	
6	33	Ker		—			All			—	
6	33	Kin		—			All			—	
6	41	Fre		—			All			—	
6	41	Kin		—			All			—	
6	41	Mad		—		0.0		32.0	32.0		44.0
6	41	Mpa		—			—			All	
6	43	Ker		—			All			—	
6	43	Kin		—			All			—	
6	43	Tul		—			All			—	
6	46	Ker	0.0		30.0	30.0		57.8		—	
6	58	Ker		—			All			—	
6	63	Tul		—			All			—	
6	65	Ker		—			All			—	
6	65	Tul		—			All			—	
6	99	Fre		—			All			—	
6	99	Ker		—			All			—	
6	99	Mad		—			All			—	
6	99	Tul		—			All			—	
6	119	Ker		—			All			—	
6	145	Fre		—			All			—	
6	145	Mad		—			All			—	
6	152	Mad		—			All			—	
6	155	Ker		—		0.0		40.0	40.0		71.3

Dist	Route	County	Area I			Area II			Area III		
			Begin PM		End PM	Begin PM		End PM	Begin PM		End PM
6	166	Ker		—			All			—	
6	168	Fre	0.0		40.0		—		40.0		65.9
6	178	Ker		—		0.0		35.0	35.0		57.1
6	180	Fre	0.0		23.0	23.0		93.0		—	
			93.0		136.0		—			—	
6	190	Tul		—		0.0		32.8	32.8		57.5
6	198	Fre	0.0		22.0	22.0		42.0		—	
			42.0		44.2		—			—	
6	198	Kin		—			All			—	
6	198	Tul	0.0		22.0	22.0		42.0		—	
6	201	Tul		—			All			—	
6	204	Ker		—			All			—	
6	216	Tul		—			All			—	
6	223	Ker		—			All			—	
6	245	Tul		—			All			—	
7	2	LA	0.0		38.4		—		38.4		82.3
7	5	LA	0.0		81.5		—		81.5		88.6
7	14	LA	0.0		34.0		—		34.0		59.5
8	2	SBd		—			—			All	
8	10	Riv	19.0		44.5		—		0.0		19.0
8	10	SBd	0.0		34.0		—		34.0		39.2
8	15	SBd	0.0		13.0		—		13.0		32.0
			32.0		147.0		—		147.0		186.2
8	18	SBd	0.0		7.0		—		7.0		73.8
			73.8		115.9		—			—	
8	38	SBd	0.0		15.0		—		15.0		59.4
8	40	SBd	0.0		70.0		—		70.0		90.0
			90.0		154.6		—			—	
8	60	Riv	0.0		20.0		—		20.0		30.5
8	62	Riv	0.0		7.3		—		7.3		9.2
			9.2		90.2		—			—	
8	62	SBd	48.0		142.7		—		0.0		48.0
8	74	Riv	0.0		49.0		—		49.0		84.0
			84.0		96.0		—			—	

Dist	Route	County	Area I			Area II			Area III		
			Begin PM		End PM	Begin PM		End PM	Begin PM		End PM
8	79	Riv	0.0		31.3		—		31.3		40.5
8	138	SBd		—			—			All	
8	173	SBd		—			—			All	
8	189			—			—			All	
8	243	Riv		—			—			All	
8	247	SBd	42.0		78.1		—		0.0		42.0
8	330	SBd	0.0		29.5		—		29.5		44.2
9	6	Iny		—			—			All	
9	6	Mno		—			—		0.0		32.3
9	58	Ker	0.0		77.0		—		77.0		108.0
			108.0		143.9		—			—	
9	89	Mno		—			—		0.0		7.6
9	108	Mno		—			—			All	
9	120	Mno		—			—		0.0		60.0
9	136	Iny		—		0.0		17.7		—	
9	158	Mno		—			—			All	
9	167	Mno		—			—		0.0		21.3
9	168	Iny		—			—			All	
9	168	Mno		—			—		0.0		1.5
9	178	Ker	0.0		57.0	57.0		88.2		—	
			88.2		104.6		—			—	
9	182	Mno		—			—			All	
9	190	Iny		—		24.5		76.5		—	
9	202	Ker		—		0.0		12.1		—	
9	203	Mno		—			—			All	
9	266	Mno		—		0.0		11.7		—	
9	270	Mno		—			—		0.0		9.8
9	395	Iny	0.0		73.0		—		73.0		129.4
9	395	Mno		—			—			All	
10	4	Alp		—			—			All	
10	4	Cal	0.0		21.4		—		21.4		65.9
10	5	Mer		—			All			—	
10	5	Sta		—			All			—	
10	5	SJ		—			All			—	

Dist	Route	County	Area I			Area II			Area III		
			Begin PM		End PM	Begin PM		End PM	Begin PM		End PM
10	12	Cal	10.0		18.2	0.0		10.0		—	
10	12	SJ	0.0		6.0	6.0		27.6		—	
10	26	Cal	12.0		25.0	0.0		12.0	25.0		34.8
			34.8		38.3		—			—	
10	26	SJ		—			All			—	
10	33	Mer		—			All			—	
10	33	Sta		—			All			—	
10	49	Ama		—			—			All	
10	49	Cal		—			—			All	
10	49	Mpa		—			—			All	
10	49	Tuo		—			—			All	
10	59	Mer		—			All			—	
10	88	Alp		—			—			All	
10	88	Ama	10.0		14.3	0.0		10.0	14.3		71.7
10	88	SJ		—			All			—	
10	89	Alp		—			—			All	
10	99	Mer		—			All			—	
10	99	SJ		—			All			—	
10	99	Sta		—			All			—	
10	108	Tuo		—			—			All	
10	120	Cal		—			All			—	
10	120	SJ		—			All			—	
10	120	Tuo	0.0		8.8		—		8.8		56.5
10	132	Sta		—			All			—	
10	140	Mpa		—		0.0		11.0	11.0		51.8
10	140	Mer		—			All			—	
10	152	Mer		—			All			—	
10	165	Mer		—			All			—	
11	8	SD	0.0		35.0		—		35.0		77.8
12	All	All		All			—			—	

6.18 GENERAL DEFINITIONS OF EXISTING HIGHWAY FACILITIES WORK

Table 6-4
General Definitions of Existing Highway Facilities Work

TYPE OF WORK	DEFINITION
REMOVE	Remove and dispose of.
ABANDON	Render unserviceable, in place, by doing some kind of work.
SALVAGE	Remove, clean, and haul to recycle center.
RESET	Remove and install or place at same station location. May be moved laterally only. No alteration required.
RELOCATE	Remove and install or place in a new location. No alteration required.
RECONSTRUCT	Remove and disassemble and construct again at an existing or new location. New parts or alteration may or may not be required.
ADJUST	Raise or lower a facility to match a new grade line. Generally associated with raising frames and grates or frames and covers of facilities on resurfacing projects. May require some removal. Includes raising or lowering of frames and covers or frames and grates of concrete or brick manholes or circular precast concrete pipe structures by adding or subtracting raising devices only. Any changes to taper of manhole or steps is "remodel."
MODIFY	A change which does not affect the basic framework or structure with only an addition or subtraction to an appurtenant part. May require some removal. Includes raising or lowering frame and covers or frame and grate of drainage inlets by removing concrete or adding concrete.
REMODEL	Rebuild facility in same location. May require some removal.
RELAY	Remove and lay in an existing or new location. Generally used for pipes or culverts and appurtenances.

6.19 STANDARDS FOR FORMATTING CONTRACT SPECIAL PROVISIONS

To prevent contract printing problems, create project specifications in accordance with the "Specification Writers' Style Guide" (to be published).

6.20 SSP EDITING

DES-OE has established editing standards to ensure statewide uniformity and to make it easier to review the specifications and prepare the final contract documents. **Adhere to these standards.**

Indicate all changes to the SSPs with a double asterisk (in Hidden Text) formatted using the "Comment" format style.

Table 6-5
SSP Editing Notation by Users

INDICATOR	PURPOSE AND USAGE
User Initials and ** For Example: JAD**	Use a double asterisk to indicate a new paragraph that has been added to an SSP or to indicate SSP paragraph that has been edited. Add user initials and the double asterisk preceding the edited paragraph. Add information about the changes. For large projects which have many changes, the date of the change can be useful.
User Initials and ## For Example: JAD##	Use a double pound sign to indicate a new paragraph that has been added to an SSP or to indicate SSP paragraph that has been edited by DES-SD. Add user initials and the double pound sign preceding the edited paragraph.
NEW, User Initials and ** For Example: NEW JAD**	Use this indicator when you have added a totally New Subsection. A new subsection includes any new special provision that has a new subsection title. Do not use this when an existing SSP has been edited or modified. Add the indicator "NEW" followed by user initials and double asterisk preceding the new section.
Underline (Blue)	Underline, in blue, any new text that is added to an SSP regardless of where it is added. New paragraphs that are added to an existing SSP are to be underlined and indicated with the double asterisk.
Strikethrough/ Hidden Text (Red)	Text that is to be deleted from an SSP is to be formatted with the "striketrough" and "hidden text" character styles in red. Do not strike-through/hide instructions, paragraph numbers, or any other text that is to remain hidden. Do not use the Microsoft Word "Track Changes" function.

DES-OE will indicate all changes to the district draft specifications with a triple asterisk (in Hidden Text) formatted using the "Right" format style. Edited text is to be indicated as shown below.

Table 6-6
SSP Editing Notation by DES-OE

INDICATOR	PURPOSE AND USAGE
User Initials and*** For Example: JAD***	DES-OE uses a triple asterisk to indicate a new paragraph that has been added to an SSP or to indicate a paragraph that has been edited. DES-OE adds the user initials and triple asterisk preceding the edited paragraph.
NEW, User Initials and*** For Example: NEW JAD***	DES-OE uses this indicator when adding a totally New Subsection. This will not be used when an existing SSP has been edited or modified. The "NEW" followed by user initials and triple asterisk indication will be added preceding the new section.
ADDED, User Initials and*** For Example: ADDED JAD***	DES-OE will use this when it adds an SSP to the PS&E submittal.
UPDATED, User Initials and*** For Example: UPDATED JAD***	DES-OE will use this to indicate when it has updated an out-of-date SSP. It will be inserted before the SSP No.
DELETED, User Initials and*** For Example: DELETED JAD***	DES-OE will use this to indicate when it has deleted an SSP in the original PS&E submittal. The entire SSP except the SSP No. and issue date will be deleted. It will be inserted before the SSP No.
Underline (Blue)	DES-OE will underline in blue any new text that it adds to an SSP regardless of where it is added. New paragraphs that are added to an existing SSP will be underlined and indicated with the triple asterisk.
Strikethrough/ Hidden Text (Red)	Text that is to be deleted from an SSP will be formatted with the "strikethrough" and "hidden text" character styles in red.

Section 7 Project Estimate of Cost Preparation

7.1 PURPOSE

The purpose of this Section is to provide guidance to the staff involved in the preparation of the Project Estimate of Cost.

7.2 GENERAL

The Project Estimate of Cost serves two purposes:

1. It estimates the fair and reasonable price the State should expect to pay for each of the items of work to be performed, based on expected prices as of the date the estimate is made. The preliminary estimate should be the best guide in determining whether or not the bids were valid and competitive.
2. It identifies all funding sources and segregation that will be used on the project and identifies funding participation levels.

To estimate the price of individual items, use recent bid prices for similar projects considered to have had competitive bidding. Bid price information can be obtained from the bid summaries, contract items by item number report, annual cost data books and California Construction Cost Index published by DES-OE. Contact the District BEES Coordinator to obtain copies of these materials, or see Appendix D, "Websites."

Consider factors which might affect bid prices, such as project location and accessibility, project terrain, effect of existing traffic on the contractor's operations, source and availability of materials and water, time limits which might require more than ordinary overtime work or double shifting, and season of the year the work is to be done.

The amount of funds allocated for the project should not influence the estimated prices. Reducing prices to keep the estimate of cost within the programmed amount or the "Minor" limit will not reduce bid prices at the time bids are opened. Bid overruns can cause serious problems such as delay of award, or rejection of bids, and project re-advertisement.

Bear in mind that funds are for project improvement (Capital Outlay) only. Do not set up funds for items to become State facilities if those items are to be used for other purposes. (Statutes prohibit the use of capital funds for maintenance purposes, e.g., setting aside funds for Changeable Message Signs for traffic control and then turning such signs over to maintenance forces.)

7.3 ROLES AND RESPONSIBILITIES

PE

Ensures that contract quantities (highway and structure) are complete and accurate and that segregated estimates are provided for projects with funding sources other than, or in addition to, State funding.

DOE

- Verifies that the Engineer's Estimate is complete and accurate and is representative of the current anticipated costs.
- Verifies that the segregated estimates are correctly prepared.

SOE

Verifies that the structure portion of the Engineer's Estimate is complete and accurate and is representative of the current anticipated costs.

OTHER FUNCTIONAL ENGINEERS

Provide complete and accurate contract quantities for their portion of the project.

DES-OE

- Ensures that the Engineer's Estimate is complete and accurate and that these items are properly designated as final pay or specialty.
- Assigns a one-time item number for non-standard items.
- Locks BEES before advertisement of the project.

7.4 REFERENCES

Basic Engineering Estimating System (BEES) manual, Section 9, "Funding Package," Coded Contract Item List, State-Furnished Materials and Expenses List in this Section, "List of Appropriate Supplemental Work Items" (to be placed on the DES-OE Website), and California Construction Cost Index.

7.5 BASIC ENGINEERING ESTIMATING SYSTEM (BEES)

Estimates are prepared using the BEES. This system:

- Provides the data files required for the Project Information Systems and Analysis (PISA).

- Provides the data needed by the Bid Opening and Progress Pay System.
- Produces segregated estimates according to fund source.

Estimators are to use the BEES for the segregated estimates on federal aid and cooperative projects as soon as the participatory rules for the project are determined. See "Segregated Estimates" in this Section. Segregated estimates for those projects with contributor funding or federal funding must be available in BEES at the time of PS&E delivery. Segregated BEES submitted after that time will be considered late and contract award may be delayed. A correct funding segregation of both highway and (if applicable) structure portions of the BEES is necessary to ensure proper CTC funding and timely award of a project after bids are opened. No changes should be necessary to any segregation once the project is listed for advertisement.

Just before listing the project for advertisement, DES-OE "locks" the BEES. After the file is "locked," only DES-OE can alter it electronically. No further changes to the BEES from the district can be permitted. District changes to the BEES must be made before the listing period.

Submit a combined estimate for all projects involving SOE. Include all elements of the project such as railroad work, temporary or detour structures (and their removal), removal of existing structures, supplemental work and mobilization. District and SOE estimates should use the same EA and Keyword in BEES for the estimate file that will be used for PS&E. The BEES EA shall be in Phase 1.

The BEES permits independent storage of data from the district and SOE for each project and the recall of separate or combined estimates. Highway estimate (H) and structure estimate (B) files must be established independently. Each office is responsible for updating its own file. Reports may be requested as highway (H), structure (B) or combined (C) by entering the code (H, B, or C) in the appropriate space on the BEES Report Request Form. If the highway and structure files were entered under different EAs, the files must be merged before requesting a combined estimate.

The district is responsible for segregating estimates and updating segregated BEES files.

When a combined estimate report is requested, BEES integrates the quantities for highway and bridge items. Where common contract items have different item prices, the item price in the highway estimate file will prevail. Structure and highway estimators should agree in advance on prices of such common items.

Review common SOE and district items, such as temporary railing, to avoid duplicate quantities in the estimate. For projects with common features such as retaining walls designed by both district and SOE, the same contract pay items should generally be used. However, if the structure item is a final pay item and the district item is not, the item should be a final pay item if they are combined. When common, adjacent features such as retaining walls and bridges are paid for with different sets of pay items, the plans must clearly indicate limits of payment for each pay item.

The Project Estimate of Cost has the following components:

- Contract Items
- Supplemental Work
- State-Furnished Materials and Expenses
- Contingencies

7.6 CONTRACT ITEMS

Contract items are the bid items of work used in the Engineer's Estimate in the Proposal and Contract book. List the items of work in numerical sequence by Item Code number. The item description should be exactly as shown in the Coded Contract Item List published by DES-OE. The coded item list is stored in a mainframe computer master file and is maintained and updated by DES-OE. A copy of the coded item list may be requested through the District BEES Coordinator. Also, see Appendix D, "Websites," for the link to the coded item list.

NON-STANDARD ITEMS

When work does not fit an established item, insert a non-standard item into the estimate. The item description should be understandable but as brief as possible. Use the same style and format as that used for standard items. Do not use abbreviations. Insert the non-standard item with similar items of work.

For non-standard items, add the suffix "A" to any six-digit standard item code number. The six-digit portion of the number determines the numeric position of the non-standard item in the estimate (for example, 190101A). During review, DES-OE will assign a one-time number based on the above information. These non-standard assigned numbers are job specific and are not to be reused in later projects. Only standard six-digit numbers and non-standard numbers with an added alpha character should appear in the estimates.

The abbreviations used for Unit of Measure should be those listed in the user instructions for BEES. If abbreviations are needed for non-standard units of measure, DES-OE must add them to the BEES approved list before incorporating a final estimate into the bid opening file.

TIME-RELATED OVERHEAD (TRO)

TRO compensates the contractor for overhead costs, including field and home office overhead that are in proportion to the time required to complete the work. Include a TRO item on all projects with a cost estimate of \$5 million or more unless the district provides the required exception approval from the Division of Design. The approval must be included in the PS&E submittal. Projects that have internal milestones or multiple calendars are excluded, and do not require an exception approval.

The TRO item will be 10 percent of the sum of all contract items, Supplemental Work and Contingencies. Each of the estimated item costs shall be adjusted downward 10% accordingly, resulting in, as closely as possible, a zero total estimate change. The unit of measure for TRO is Working Day (WDAY) for regular projects and Lump Sum (LS) for A+B projects.

For the authorizing documents, see the April 19, 2000 memorandum, "Standard Special Provisions (SSP) - Overhead, Force Account Payment, and Progress Schedule (Critical Path)." Also, see the May 30, 2000 memorandum, "Time Related Overhead Contract Item."

MOBILIZATION

Mobilization reimburses the contractor for costs incurred before and during "move in." Use a mobilization item on each Minor "A " and Major project when the number of working days for the project is 50 or more (excluding plant establishment working days). A mobilization item may be included for projects consisting primarily of bridge work even though the project's number of working days and estimated cost are less than the criteria above.

When the SOE has included an item of mobilization, as described above, the district shall include an item for mobilization. The item of mobilization will be 10 percent of the sum of all contract item costs, including the item of mobilization. It is not necessary to enter a dollar amount. Simply enter "10%" in the BEES estimate for the mobilization item price, and BEES will automatically calculate the mobilization cost. If an item of mobilization is included in the estimate, adjust unit prices accordingly.

SPECIALTY ITEMS

Specialty items are work that the Prime Contractor can be expected to subcontract. Usually, such work requires equipment and expertise not normally possessed by the Prime Contractor. The Department normally requires the awarded contractor to perform a minimum of 50 percent of the dollar amount of the contract work after the cost of specialty work is subtracted from the total contract amount. This requirement ensures that the contractor does the majority of work and is not just a broker.

Specialty items are designated by "(S)" under the sequential item number on the Engineer's Estimate. Specialty items are to be identified by the DOE and the SOE.

These guidelines apply to Specialty Items:

- When a project contains work that is different from the basic type of work and that would normally be done by a specialty contractor, designate the item or items covering such work as specialty items.
- If the work can be performed by the awarded contractor's forces, do not designate the work as a specialty item.

The following rules apply when designating specialty items:

- If the Engineer's Estimate is less than \$500,000, each specialty item must have a value of \$2000 or more.
- If the Engineer's Estimate is greater than \$500,000, each specialty item must have a value of \$5000 or more.
- Group items (for example, striping, pavement markings, and pavement markers) to meet the value criterion.
- Keep specialty items to a minimum to ensure that the awarded contractor does the majority of the work. If the awarded contractor is expected to be other than a general contractor, designate work which would not be done by the awarded contractor as specialty items .
- If it is anticipated that the awarded contractor will be a general contractor, limit specialty items to those listed in Table 7-1.
- When a highway project involves the construction, alteration or modification of an off-highway building structure, designate items of building work as specialty items.

Table 7-1
Specialty Items

ITEM CODE	SPECIALTY ITEMS
120090	CONSTRUCTION AREA SIGNS
120100	TRAFFIC CONTROL SYSTEM
12----	TRAFFIC CONTROL DEVICES SUCH AS PORTABLE CHANGEABLE MESSAGE SIGN, BARRICADE, CONES.
1531--	PLANE PAVEMENT
197060	SOIL NAIL ASSEMBLY
20----	EROSION CONTROL, PLANTING, IRRIGATION, AND PLANT ESTABLISHMENT WORK
4201--THRU 4202--	GRIND AND GROOVE PAVEMENT
490101 THRU 499055	DRIVING PILES, CAST-IN-DRILLED-HOLE CONCRETE PILING AND SHEET PILING
500001	PRESTRESSING CAST-IN-PLACE CONCRETE
500050	TIEBACK ANCHOR
500060	TIEDOWN ANCHOR
512000 THRU 512005	FURNISH PRECAST CONCRETE GIRDER
512100 THRU 512103	FURNISH PRECAST CONCRETE DECK UNIT
512200 THRU 512215	FURNISH PRECAST PRESTRESSED CONCRETE GIRDER

ITEM CODE	SPECIALTY ITEMS
512220 THRU 512242	FURNISH PRECAST PRESTRESSED CONCRETE BOX GIRDER
512260 THRU 512271	FURNISH PRECAST PRESTRESSED CONCRETE T GIRDER (INVERTED T)
512272 THRU 512276	FURNISH PRECAST PRESTRESSED CONCRETE T GIRDER (INVERTED)
512300 THRU 512304	FURNISH PRECAST PRESTRESSED CONCRETE DECK UNIT (SLAB TYPE)
512350--THRU 512354	FURNISH PRECAST PRESTRESSED CONCRETE SLAB
512360	FURNISH PRECAST PRESTRESSED CONCRETE PANEL
515050	GRIND BRIDGE DECK
518050	PTFE BEARING
518051	PTFE SPHERICAL BEARING ((ENGMET))
5124--THRU 5125--	ERECT PRECAST MEMBERS
515059 THRU 515165	CORE CONCRETE
517950 THRU 518220	SOUND WALLS
519080 THRU 519119	JOINT SEALING
5201--	BAR REINFORCING STEEL
5301--	SHOTCRETE
5400--THRU 5401--	WATERPROOFING
550101	STRUCTURAL STEEL
550102	STRUCTURAL STEEL (BRIDGE)
550110	COLUMN CASING
550120	ALTERNATIVE COLUMN CASING
5502--	ERECT STRUCTURAL STEEL
5601--THRU 5610--	INSTALL SIGN STRUCTURE, CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)
570115	ABUTMENT LUMBER BLOCKING
570120	TREATED LUMBER AND TIMBER
570130	UNTREATED LUMBER AND TIMBER
575004	TIMBER LAGGING
575005	TIMBER RETAINING WALL
575040	TIMBER CATWALK
5900--THRU 5902--	CLEAN AND PAINT STEEL
597600	PREPARE AND PAINT CONCRETE
597601	PREPARE AND STAIN CONCRETE
598004	CERAMIC TILE
60----	RAILROAD TRACK WORK
7110--THRU 719506	SANITARY SEWERS
7405--THRU 7415--	PUMPING PLANT RELATED WORK AND EQUIPMENT

ITEM CODE	SPECIALTY ITEMS
7500--THRU 7505--	MISCELLANEOUS METALS
760005	ABANDON EXISTING WELL
760011	WELL DEVELOPMENT
760012	TESTING WELL
760021	DRILL PILOT HOLE
760022	REAMING WATER WELL
760025	CONDUCTOR CASING
760030	BLANK WELL CASING
760035	WELL SCREEN
8000--THRU 8099--	FENCES
8320--THRU 8395--	RAILINGS AND BARRIERS (EXCEPT CONCRETE)
83959-THRU 8396--	CRASH CUSHIONS
8405--THRU 8407--	STRIPING AND PAVEMENT MARKINGS
8501--THRU 8502--	PAVEMENT MARKERS
8601--THRU 8690--	SIGNALS, LIGHTING, AND ELECTRICAL SYSTEMS
9901--THRU 9950--	BUILDINGS AND RELATED FACILITIES

If an item listed in Table 7-1 is a majority of the work (e.g., Highway Planting and Electrical projects), do not designate it as a specialty item. See Table 7-2 and Table 7-3 for items that are to be designated as specialty items for Highway Planting and Electrical projects, respectively.

Items with the word "Furnish" in their description, such as "furnish steel piling" or "furnish sign structure" are usually not designated as specialty items.

Items with prefixes such as temporary, remove, salvage, adjust, remodel, relocate, and reconstruct which are similar to the approved specialty items listed in Table 7-1 should also be designated as specialty items. Examples are temporary traffic stripe and reconstruct metal beam guard railing.

Table 7-2
Highway Planting Projects Specialty Items

ITEM CODE	SPECIALTY ITEMS
120090	CONSTRUCTION AREA SIGNS
120100	TRAFFIC CONTROL SYSTEM
12----	TRAFFIC CONTROL DEVICES SUCH AS PORTABLE CHANGEABLE MESSAGE SIGN
19----	EARTHWORK
26----	AGGREGATE BASE
39----	ASPHALT CONCRETE
40----	PORTLAND CEMENT CONCRETE PAVEMENT
68----	DRAINAGE FACILITIES
73----	CONCRETE CURBS AND SIDEWALKS
7500--THRU 7505--	MISCELLANEOUS METALS
8000--THRU 8099--	FENCES
8601--THRU 8690--	SIGNALS, LIGHTING, AND ELECTRICAL SYSTEMS

Table 7-3
Electrical Projects Specialty Items

ITEM CODE	SPECIALTY ITEMS
120090	CONSTRUCTION AREA SIGNS
120100	TRAFFIC CONTROL SYSTEM
12----	TRAFFIC CONTROL DEVICES SUCH AS PORTABLE CHANGEABLE MESSAGE SIGN
19----	EARTHWORK
20----	EROSION CONTROL, PLANTING, IRRIGATION, AND PLANT ESTABLISHMENT WORK
26----	AGGREGATE BASE
39----	ASPHALT CONCRETE
40----	PORTLAND CEMENT CONCRETE PAVEMENT
68----	DRAINAGE FACILITIES
73----	CONCRETE CURBS AND SIDEWALKS
7500--THRU 7505--	MISCELLANEOUS METALS
8000--THRU 8099--	FENCES

FINAL PAY ITEMS

Items of work that would be difficult for the Engineer to measure for payment during construction are designated as Final Pay items. Final pay items are to be designated on the

Engineer's Estimate using (F) or (S-F) as appropriate for the item involved. Do not identify final pay items on the plans.

Payment for final pay items will be made for the exact quantity shown on the Engineer's Estimate unless the Engineer orders a change in the dimensions of the work. The Contractor will not be provided additional payment for quantities that exceed those shown on the estimate, so it is important that final pay item quantities are accurate. Do not round final pay items in the Engineer's Estimate.

The contract items of work listed in Table 7-4 are generally designated final pay.

Table 7-4
Items Generally Designated as Final Pay

ITEM	CONSTRUCTION WORK
Minor Concrete (Minor Structure)	Drainage Inlets and Pipe Headwalls
Miscellaneous Iron and Steel	Frames and Grates
Class 1 Concrete (Structure)	Box Culverts and Wingwalls
Bar Reinforcing Steel	Box Culverts and Wingwalls
Furnish and Install Sign Structure (Tubular, Truss, Lightweight, etc.)	Overhead Sign Structures
Structure Excavation (Bridge, Tunnel)	Bridges, Tunnels
Structure Backfill (Bridge)	Bridges
Structural Concrete, Bridge	Bridges
Structural Concrete, Bridge Footing	Bridges
Structural Concrete, Approach Slabs	Bridges
Sound Wall (Masonry Block)	Walls, Bridges
Structural Concrete, Retaining Wall	Retaining Walls
Bar Reinforcing Steel (Bridge)	Bridges
Bar Reinforcing Steel (Retaining Wall)	Retaining Walls
Miscellaneous Metal (Bridge)	Bridges
Miscellaneous Metal (Restrainer)	Bridges
Railings and Concrete Barrier on Structures	Bridges
Pipe (Supply Line)	Irrigation Systems
Conduit	Communication
Channel, Stripping or Tunnel Excavation	Channels, Tunnels
Pervious Backfill Material	Bridges, Retaining Walls
Earth Retaining Structure	Retaining Structures
Structural Concrete, Deck Overlay	Bridges
Structural Concrete, Tunnel	Tunnels
Structural Concrete, Tunnel Footing	Tunnels
Structural Concrete, Retaining Wall	Retaining Walls

ITEM	CONSTRUCTION WORK
Structural Concrete, Pier Column	Bridges
Structural Concrete, Pumping Plant	Pumping Plants
Architectural Treatment	Bridges, Walls
Place Deck Overlay (Concrete)	Bridges
Concrete Closure Wall	Bridges
Place Polyester Concrete Overlay	Bridges
Grind Bridge Deck	Bridges
Bar Reinforcing Steel (Bridge, Retaining Wall, Soundwall, Tunnel, Pumping Plant)	Bridge, Retaining Wall, Soundwall, Tunnel, Pumping Plant
Shotcrete	Bridges, Walls
Seal Concrete Surface	Bridges
Deck Seal	Bridges
Treat Bridge Deck	Bridges
Structural Steel	Bridges
Structural Steel (Bridge)	Bridges
Furnish Structural Steel Bridge	Bridges
Erect Structural Steel Bridge	Bridges
Miscellaneous Metal (Retaining Wall)	Retaining Wall
Miscellaneous Metal (Tie Rod, Restrainer)	Bridges
Bridge Deck Drainage System	Bridges
Pumping Plant Metal Work	Pumping Plant
Handrailing	Bridges
Communication Conduit (Bridge)	Bridges
Sprinkler Control Conduit Bridge	Bridges

7.7 SUPPLEMENTAL WORK

Supplemental Work is work that is anticipated but is of such an uncertain nature or amount that it cannot be done on a contract item basis.

Do not use Supplemental Work:

- To take the place of complete design work and quantity calculations. When work can be shown or specified such that it is biddable, it must be paid for by contract item.
- To provide extra funds in addition to contingencies by adding items or amounts in excess of what can be reasonably anticipated.
- To perform work which should be funded from other sources such as maintenance. Note that maintenance work is not eligible for federal participation.

- For contract funds to be paid to anyone other than the contractor who performs the work, such as railroad inspection. Include these funds under State-Furnished Materials and Expenses.

Funds for Extra Work specified in the Standard Specifications or contract special provisions should come from contingencies.

A "Supplemental Work" Decision Document (pending at this time) limits the appropriate items and the total allotment for Supplemental Work. The Division of Construction will establish and regularly update the list of items and the project categories with higher total allotment percentages.

Exceptions to appropriate supplemental work items or allotment limits require written request by district management (Deputy District Director for Construction) subject to approval of the Construction Division Chief. Approvals for exceptions must be provided with the PS&E submittal. This information is pending approval. Until available, please refer to the January 6, 1992 memo from R. P. Weaver, "Contract Supplemental Work" for guidance on the use of Supplemental Work.

FHWA must be consulted when adding funds for extra work in "Supplemental Work" for supplemental work items identified as non-participating on the List of Appropriate Supplemental Work Items. See Appendix D, "Websites," for the link to this list.

7.8 STATE-FURNISHED MATERIALS AND EXPENSES

Items to be listed under this component consist of:

- Work to be done by State forces or others concurrently with contract construction operations.
- Materials to be purchased and charged against the project but to be paid for directly by the State, not the contractor.

Item codes for this category of work must have a 06 prefix (06XXXX) to be properly calculated in the BEES. State-furnished materials and expenses are to be subtotaled and included as part of the total cost of the project.

FHWA has approved the following State expenses as eligible for federal reimbursement. Therefore, an approved PIF is not required.

- Resident Engineer's office rental cost. This is normally included when
 - A single project cost exceeds \$300,000 and the project time limit is 50 or more working days, or when

- There are several projects in the same area and the total funds for these projects exceed \$300,000, and the time required to complete all of the projects will probably exceed 50 days. In this case, the cost of the office should be distributed proportionally among the projects involved according to their estimated use of the office.
- Railroad Work – work to be done by railroad agency.
- Traffic Management Plan – includes TV, radio, newspaper, news bulletin or any other press information expenses.
- Construction Zone Enforcement Enhancement Program (COZEEP) – safety enforcement work to be provided by the California Highway Patrol.
- Electrical Service – expenses necessary to provide power supply to temporary facilities needed to complete the contract. This service is to be provided by utility company.
- Environmental Mitigation – mitigation work negotiated with the permitting agencies to be performed after or concurrently (in a different location) with the contract.

FHWA has approved the following materials as being in the public interest for the Department to furnish to the contractor as State-furnished materials on federal aid projects:

- Permanent sign panels and mounting hardware.
- Types N, P, and R object marker panels and reflectors.
- Laminated wood box posts and metal caps.
- Monument Disks.
- Markers for railings and concrete barriers.
- Traffic signal controller assemblies, including wired cabinets and loop detector units.
- Closed circuit television cameras, changeable message signs, and assemblies.
- Light emitting diode (LED) signal modules (Red, Amber, Green, and Arrows) and LED pedestrian signal face modules (Upraised Hand & Walking Person) for traffic signals.
- Lamps for traffic signal units, flashing beacons, and sign illumination fixtures.
- Asphalt concrete sealant for inductive detector loops.
- Self-adhesive reflective numbers and sealer for numbering lighting equipment.

- Recycled (salvaged) material in stock, such as temporary traffic signals and flashing beacons.
- Seed and plants not commercially available, either by type or size, that must be grown or obtained for specific projects.
- Uninterruptible power supply for Traffic Signals.

Obtain FHWA concurrence for any materials not listed above on a project-by-project basis during PS&E development. All PIF requests must be processed through the Federal Resources Office to obtain approval. Full oversight projects require FHWA approval. State authorized projects require the Federal Resources Office's approval.

When the U.S. Forest Service requires payment for merchantable timber, the Department should pay the Forest Service directly. Include an item in "State-Furnished Materials and Expenses" to provide payment from construction funds.

7.9 CONTINGENCIES

The next-to-last entry of the Project Estimate of Cost is contingencies. Typically, the amount for contingencies will be a nominal 5 percent of the subtotal of the cost of contract items, supplemental work, and State-furnished materials and expenses. The contingency amount is included in the grand total of the final estimate to allow for unforeseen costs. Projects that are primarily asphalt concrete may only need a 2 percent contingency. For some small projects, a 10 percent contingency may be justified if there is a greater likelihood of unforeseen costs because of the nature of the project or the site of the work.

The BEES system automatically allows for a contingency of 5 percent, but any amount may be entered, either by percent or by specified dollar amount. The BEES adjusts the contingency amount automatically to give a rounded grand total, except when the contingency is entered as a specific dollar figure. Approval from the Chief Engineer is required and to be provided with the PS&E Submittal when a contingency of other than 5 percent is used in the final estimate.

7.10 ESTIMATING ITEM PRICES

Estimating is not an exact science. However, estimators can prepare reasonable estimates of the cost of the work to be performed by the contractor.

Estimates should never be artificially reduced to stay within the funding limits, nor should they be increased to make more project funding available for the district.

Most overruns are due to conditions that existed at the time the estimate was initially prepared and should have been considered. Estimators should consider the following factors that may affect the bid prices on construction projects.

FLUCTUATION OF COSTS

Review and update estimates as near project "Listing" for advertisement as possible. Include an updated BEES estimate with the District Response Memorandum.

When the district submits the PS&E as a "Service Level 2" or an "AADD" project, the estimate in the PS&E Submittal becomes the final, updated estimate. If DES-OE performs an IA or lists the project shortly after PS&E delivery, the BEES estimate submitted with PS&E will suffice. BEES Item Price and Quantity Reports contain dates when item prices and quantities were last updated.

Material shortages may develop at unexpected intervals, causing an increase in material prices. Wages continually increase, although usually at a somewhat predictable rate. The time of year a project is advertised or constructed often affects prices.

Review and update unit prices and estimates as conditions change. Estimates must be current at the time the project is Ready-to-List. The district should review and update the estimate if the California Construction Cost Index is rising or falling frequently and rapidly.

TRAFFIC CONDITIONS

Traffic conditions can have a significant effect on bid prices. Adjust prices to reflect special difficulties, dangers, and expenses caused by traffic. Contractors are inclined to raise their prices when they bid on projects with difficult traffic conditions.

RESTRICTIVE WORK HOURS OR METHOD OF WORK

Restricting the working hours or the method of work on a project may have a major effect on prices. If the special provisions limit work to nighttime or short shifts, increase unit prices to reflect:

- The cost of premium wages for night work.
- Premium payment for partial shifts.
- General decreases in productivity and efficiency.

Night work for asphalt concrete can be especially expensive where small quantities are involved because asphalt plants do not usually operate at night and may have to do special runs at a much higher operating cost per unit.

SMALL QUANTITIES OF WORK

Small quantities of work will nearly always have higher unit costs than identical work in larger quantities. Move-in costs, overhead, and so on, must be distributed over a much smaller

base. Production is usually inefficient and slow for small quantities that will also increase unit costs.

SEPARATED OPERATIONS

Separated operations will generally have higher item costs. The order of work or scattered locations of work may require portions of a work unit to be constructed as separate operations, each requiring separate move-in and move-out costs. The unit prices should then be based on the smaller operations, not on the total quantities for the project.

HANDWORK AND INEFFICIENT OPERATIONS

Handwork and small or inefficient operations (even though equipment may be used) will have higher unit costs than work adaptable to mass production machine operation or high production rates.

ACCESSIBILITY

Work on an existing interchange may require long out-of-direction movements by construction personnel and equipment if the contractor must observe one-way ramp movements or enter or leave a freeway only at interchanges. Material hauling done under these conditions can be especially expensive.

Work is expensive at the top of retaining walls, on slopes, or where workers must climb slopes to get to the work area, regardless of whether the operation is handwork or is done by equipment. This is because work that is easy to do on level ground or a gentle slope may be almost impossible to do on steep slopes. Such a work situation will affect the contractor's bid.

GEOGRAPHIC LOCATION

Geographically remote locations usually result in higher bid prices. Estimates should reflect subsistence payments when required. The source of supplies and the distance to the project from these sources should also be considered.

CONSTRUCTION SEASON

The time of the year construction is scheduled may affect the bid prices. Contractors are usually more available for work early in the spring and will therefore bid more competitively at that time. Later in the spring or summer, many of the contractors have going contracts to keep them busy and therefore tend to bid higher or not at all.

For projects to be awarded near the end of summer or the construction season, it is important to know if construction can be finished before the construction season ends. If a job cannot be finished before the end of the construction season, contractors will increase bid prices to cover overhead during winter suspension, to repair winter damage, and so on. Even if contractors reasonably expect to finish before winter, they may protect themselves by increasing bids to

allow for damage due to early rains. This is especially true if construction involves work in or around drainage channels in high precipitation or snow areas.

MATERIAL SHORTAGES

Material shortages will have a major effect on bid prices since prices are directly affected by supply and demand. Where a shortage is especially acute, the district might consider a change in design rather than face increasing prices.

7.11 ESTIMATE PRICING METHODS

There are two methods commonly used for estimating prices. One method is to use previous bid prices as a basis for establishing prices on the proposed project. The other method is to make a complete analysis of production rates, labor costs, and material costs. These methods can be used individually or in combination.

PREVIOUS BID PRICES METHOD

Basing estimates on previous bid prices is probably the most widely used and the most practical method. When using this method, take into consideration these factors:

- Use of approximately the same size and type of project, having similar quantities for individual items.
- Consider using the average of the three low bidders or using the second low bidder.
- At a minimum, revise previous bid prices by the projected change in the California Construction Cost Index between the date of the old bid and the anticipated date of the new bid.
- Adjust the reference bid price to reflect conditions of the project, such as type of terrain, geographical location, soil, traffic, and other related factors.
- Do not use lump sum bid prices or unit prices for items of work (for example, culverts) that include varying amounts of other related work.
- Seasonal work items vary by the time of year. Use comparable months.

There are several sources of previous Bid Price data:

- **Quarterly Report, "Item Cost Data Bases":** This report contains all contract items with quantities and prices used in the past quarter, listed by item code number.
- **Annual Contract Cost Data Book:** This book contains district and statewide average prices by contract item number for contracts in a particular calendar year.

- **Bid Summary Results:** Available on the DES-OE Web page. See Appendix D, "Websites," for links to this and other Bid Price data.

COMPLETE ANALYSIS METHOD

This method is not usually practical for all contract items of work. It may be used occasionally for earthwork items where rock or unusual haul is required, or for lump sum items such as signals and lighting.

When using this method, carry out these initial steps:

1. Analyze the proposed construction.
2. Estimate production rates.
3. Compile a materials list.
4. Find materials costs using available price lists.
5. Determine labor and equipment hours based on the production rates.
6. Calculate subtotal using the above factors.
7. Add overhead and profit for the total cost.

It is especially important to consider possible premium pay for overtime on night work and subsistence. On larger projects with long time limits, it will be necessary to determine if the majority of a work item will be done early or late in the project. To provide for work that cannot be done early in the project, it may be necessary to forecast wage scales and material cost increases in order to accurately estimate contract item costs.

7.12 GUIDELINES FOR ROUNDING QUANTITIES

A PS&E contains two kinds of quantities:

1. Actual calculated quantities shown on the plans to help the contractor and the Engineer complete the project.
2. Rounded quantities included in the Engineer's Estimate in the Proposal and Contract book to simplify bidding.

With the exception of final pay items, quantities should be rounded. Rounding keeps the estimate from seeming more precise than is reasonable, and simplifies bidding.

Total quantities are to be rounded in the BEES file by adjusting the calculated quantities, usually upward. Round on total or end quantities only, never on partial quantities or subtotals. Quantities on plans should be actual calculated quantities, never rounded quantities.

Quantities greater than 1,000 are to be rounded to no more than three significant figures. The significant figures are those figures of a number that begin with the leftmost figure and extend to the last non-zero figure to right. For example, 5,050 and 1,620,000 have 3 significant figures. 1,103 would be rounded to 1,110 and 2,234,541 would be rounded to 2,240,000.

Quantities less than 1,000 are to be rounded to no more than two significant figures. For example, 426 would be rounded to 430.

Avoid decimal quantities. However, it is not always possible to eliminate the decimal for small quantities. For example, a total quantity such as 1.4 kg of seed (erosion control) cannot be rounded up to 2 kg or down to 1 kg without having an estimated quantity more than 25 percent off the calculated quantity. Therefore, decimal quantities of less than 5 must be rounded to one decimal place. Decimal units can be shown to only one decimal place because of limitations in BEES. Volumetric or weight quantities of 5 or greater are to be rounded to the nearest whole number. Sometimes it is possible to avoid the use of decimal quantities by changing the unit of measure. For example, use 500 kg of commercial fertilizer instead of 0.5 tonne.

Rounding must not produce a condition where the estimated quantity will be beyond the 25 percent limit for overruns or underruns specified in Section 4 of the Standard Specifications.

Final pay quantities entered in the Engineer's Estimate are not to be rounded, except to eliminate any decimal figures for total pay quantities of more than 5 units (cubic meters, meters, etc.). When the total final pay quantities contain decimal figures and they are 5 units or less, the quantity shall be rounded to not more than one decimal place when entered in the Engineer's Estimate.

7.13 SEGREGATED ESTIMATES

Projects with multiple funding sources must have a segregated BEES estimate identifying the sources and levels of funding. Enter all segregated estimates into the BEES during project design. Segregated estimates must be complete when the district submits the PS&E to DES-OE. It is the district's responsibility to segregate the BEES file including DES-SD's items.

FEDERAL AID PROJECTS

Segregated estimates are required when federal aid projects involve any of the following:

- **Highway work:** Segregate each item quantity according to federal fund type using the appropriate reimbursement ratio. Current reimbursement ratios and applications can be obtained from the Division of Budgets, Office of Federal Resources, or the appropriate FHWA Engineer.

- **Structure work:** Separate each structure by component level. Funding segregation used in highway work is not applicable to structure estimates because FHWA requires costs to be identified by individual structure.
- Non-participating items of work.
- Non-participating portions of the project.
- Work paid for by others (for example, cities, counties, or local transportation agencies contributing to construction costs under cooperative agreements).
- Utility relocation when done by contract item work (by Right of Way, Utility, or Railroad Agreement).
- Work which is not a part of the project (work that is being done on the same State contract but outside of the federal aid project limits).

If a cooperative agreement or utility agreement requires anyone other than the State to pay for any of the contract items, Supplemental Work or State-furnished Materials and Expenses, then those items are to be segregated as nonparticipating work.

The information needed to prepare federal segregated estimates is generally available to the PE before the district completes the PS&E. All funding sources and levels should be determined before PS&E submittal to DES-OE and that information should be reflected in the BEES estimate.

The district is to submit the BEES federal segregated estimates and the draft Form E-76 to the Division of Budgets, Office of Federal Resources either:

1. at the time the district responds to DES-OE's request for additional information, or
2. with the PS&E submittal, if submitted under Service Level 2.

DISTRICT AND COUNTY SEGREGATED ESTIMATES

Separate estimates are required to segregate between districts and between north and south counties. Separate estimates are not required to detail other projects in more than one county. However, a cost distribution (in percent) by counties is to be provided in the BEES "narrative report."

Segregated BEES estimates may be segregated by district, by north and south, and by County using the location code to identify quantities that must be included. Designate location codes at the time of entry into the BEES.

OTHER AGENCIES INVOLVED

Where other sources are contributing funds toward construction through a cooperative agreement, utility agreement, Right of Way contract, purchase order, or other instrument, a segregated estimate is required which identifies each contributing agency. If there is a cooperative agreement on a project, a copy of the agreement must be included with the copy of the PS&E Package sent to Headquarters Office of Federal Resources.

7.14 FEDERAL TRAINEE PROGRAM

In California "trainees" are registered apprentices. There are relatively few crafts in highway work which use apprentices: brick layers, carpenters, cement masons, electricians, equipment operators, iron workers, pile bucks, and a few others. There are no apprentice teamsters or laborers. The ratio of journeymen to apprentices is generally 5 to 1. Based on these considerations, the number of trainees established for a project should be determined by examining the extent of only the work that is to be done by the apprenticable crafts. The following procedure should be used as a guide for establishing the number of trainees required:

1. Verify that the project has federal aid
2. Verify that the project has 100 or more working days
3. Check that the sum of the individual totals for the following items in the draft Engineer's Estimate is greater than \$400,000:
 - Excavation (all kinds)
 - Embankment and backfill (but not imported borrow)
 - Drive piling
 - Portland Cement Concrete (all classes except precast items)
 - Sound walls (masonry block)
 - Retaining walls, bin walls, etc.
 - Concrete box culverts
 - Bar reinforcing and prestressing steel
 - Erect structural steel
 - Highway lighting

- Signal systems, loop detectors
 - Electrical work for pumps, landscaping, etc.
 - Lump sum items for buildings, restrooms, etc.
4. Determine the number of trainees from the total Estimate costs in the categories listed above, using the following table:

Table 7-5
Federal Trainee Schedule

\$ Value	Number of Trainees	\$ Value	Number of Trainees
> 400,000	1	16,000,000	15
700,000	2	18,000,000	16
1,000,000	3	20,000,000	17
1,500,000	4	23,000,000	18
2,000,000	5	26,000,000	19
2,500,000	6	29,000,000	20
3,000,000	7	33,000,000	21
4,000,000	8	37,000,000	22
5,000,000	9	41,000,000	23
6,500,000	10	45,000,000	24
8,000,000	11	50,000,000	25
10,000,000	12	* > 50,000,000	
12,000,000	13		
14,000,000	14		

* 25, plus 1 additional trainee for every \$5,000,000 over \$50,000,000

5. An amount of \$800 per trainee is inserted in the Supplemental Work component of the Estimate using the description, "Federal Trainee Program."

Section 8 DES-OE Scheduling

8.1 PURPOSE

This Section provides detailed procedures, roles and responsibilities for scheduling DES-OE services and monitoring project schedules. Districts are to use this guide to schedule and resource DES-OE project delivery services, adjust project schedules and resources, and monitor project status toward RTL and contract award.

8.2 ROLES AND RESPONSIBILITIES

DISTRICT DIRECTOR AND DEPUTY DISTRICT DIRECTOR FOR PROGRAM, PROJECT, AND RESOURCE MANAGEMENT

- Allocates sufficient resources to DES-OE to perform requested services.
- Requests Risk Advertisement services as needed.

PROJECT MANAGER

- Negotiates work agreements with DES-Project Coordination Engineers (PCE) and develops project workplans in a timely manner.
- Uses the current DES-OE Workload and Duration Estimating Table to input DES-OE resources and schedules into XPM.
- Uses scheduling procedures contained in this guide to secure project delivery services with DES-OE.
- Monitors project progress as needed.
- Acts as liaison between district and DES-OE for questions on advertising constraints and project funding.
- Submits constraint and funding documentation in a timely manner to meet requested schedules.
- Schedules target RTL dates with respect to programmed funding and desired Begin Construction date.

DES-OE SCHEDULING ENGINEER

See Section 3.3.7.

8.3 BACKGROUND

Districts should be aware that, depending on the type of funding, projects have specific fiscal year delivery milestones. These deadlines should be considered when scheduling projects for RTL. Adequate activity durations must be provided to DES-OE to provide the services described in Section 3 of the RTL Guide.

SHOPP PROJECTS

All SHOPP projects must be RTL'd by June 30th of the programmed year. Use the DES-OE Workload and Duration Estimating Table to determine activity durations and target PS&E submittal dates.

STIP PROJECTS

All STIP projects must be voted by the CTC by the last scheduled CTC meeting of their programmed year. Use the DES-OE Workload and Duration Estimating Table to determine activity durations and target PS&E submittal dates.

MINOR "A" PROJECTS

All Minor "A" projects and projects partially funded with Minor "B" funding must be awarded before the end of the fiscal year (FY) in which they are programmed.

To ensure that Minor "A" projects can be processed and awarded by the end of the FY, the PS&E Packages must be submitted to DES-OE according to the following Schedule:

- 50% by October 1
- 70% by November 1
- 90% by December 1
- 100% by January 2

Minor "A" projects not delivered by January 2nd are at risk of not being awarded by June 30th. Projects submitted under AADD should be received by DES-OE no later than March 1.

MAINTENANCE PROJECTS

As with Minor "A" projects, Maintenance projects must be awarded before the end of the fiscal year in which they are programmed.

There are two scenarios applicable to Maintenance projects:

1. "Fully funded" projects are to be advertised and awarded in a single fiscal year.

2. "Dollar (\$1) projects" are to be advertised and awarded in a single fiscal year. Construction is usually begun and completed in the following fiscal year after adoption of the State budget. However, construction could begin in the same fiscal year of award if funds become available and initiation of work is mutually agreed to by the Department and the Contractor.

Projects budgeted in a particular fiscal year and advertised before adoption of the State budget for that year will require approval for Risk Advertisement and special contract language.

Projects to be advertised, awarded, and constructed during the same fiscal year should be submitted to DES-OE in the time frame as Minor "A" projects stated above. Projects submitted under AADD should be received by DES-OE no later than March 1. Projects advertised after March 1 will be advertised as \$1 projects.

The district must indicate the funding method to be used (either fully funded or \$1 project) on the PS&E submittal and the "Budget Verification of Highway Maintenance Funds" form.

8.4 ESTABLISHING MILESTONE TARGET DATES

Project Managers should use the current DES-OE Workload and Duration Estimating Table (see Appendix D, "Websites") when determining XPM milestone dates. DES-OE Milestones and Activities are described in the RTL Guide Introduction. To allow for potential schedule slippage, DES-OE recommends that districts do not schedule target RTL dates in the 4th quarter of the fiscal year in Baseline Delivery Plans.

8.5 FACTORS AFFECTING PROJECT SCHEDULES

The factors listed below will affect the setting or achievement of project schedules. Before establishing PS&E Submittal and RTL dates, the Project Manager should carefully consider those factors that may cause a project to be delayed.

EARLY SUBMITTAL

Districts are encouraged to submit projects early. If staff becomes available in DES-OE, these projects may be assigned early for processing.

INCOMPLETE SUBMITTAL

Projects submitted with all RTL Requirements (see Section 1) complete will have higher priority than incomplete projects. Projects submitted with due or pending RTL requirements will no longer have a DES-OE commitment to meet the target Draft Contract Ready date and must be renegotiated with the DES-OE Scheduling Engineer.

The district PS&E submittal should be the final design for the project, with no known revisions or additional information to be developed after delivery of the PS&E to DES-OE.

The district is to complete design and preparation of the PS&E and obtain all reviews and approvals before submitting the PS&E to DES-OE.

Revisions requested by the district after the PS&E has been submitted will delay the project. When significant additional work by DES-OE is required as a result of revisions to the project, other district projects may be affected. Revisions will require DES-OE to reevaluate the PS&E received date and reschedule subsequent target milestone completion dates such as RTL, Award, and Begin Construction. See Section 11.5, "Revisions and Changes."

Districts should update XPM target dates for PS&E submittal and RTL if the project becomes delayed.

LATE SUBMITTAL

For projects that miss a scheduled Delivery Plan PS&E target date, DES-OE will not commit to meet the target draft contract date. The district must renegotiate the schedule with the DES-OE Scheduling Engineer and update the schedule in XPM.

NOT IN THE DELIVERY PLAN

Major projects will be delayed at PS&E Submittal if they are not listed in the Division of Project Management Delivery Plan. For assistance, contact the Chief, Office of Workload and Data Management, Division of Project Management.

PS&E DISTRIBUTION

The district must provide the applicable documents to Divisions that are identified on the Cover Memorandum's PS&E Distribution List prior to submittal to DES-OE. Failure to do so will delay the advertisement of the project.

DISTRICT RESPONSE

The district has a short period to respond to requests for additional information. Included within this period is the time DES-OE needs to incorporate the additional information to complete the contract documents (the Draft Contract Ready milestone). Timely district response is necessary in order to keep the project on schedule. District delays in providing all the requested information, including external clearances, may cause subsequent target milestone dates to be missed.

FUNDS REQUEST AND FUNDING PACKAGE

Projects requiring a CTC vote cannot be advertised until project funds are allocated by the CTC. This process can take as long as 6 weeks. The district must submit a project funds request for all Capital Outlay Projects (Minor "A," Majors such as STIP and SHOPP) to the Division of Budgets. As projects are submitted to DES-OE for processing, send a revised Funds Request when the project estimate changes.

A copy of the funds request must accompany the PS&E submittal along with the Funding Package. See Section 9, "Funding Package."

While projects that are entirely funded by a local agency do not require a CTC vote, a fund request is to be submitted to the Division of Budgets for preparation of an Information Report for the CTC.

FEDERAL TRANSPORTATION IMPROVEMENT PLAN (FTIP)

All federally funded projects must be in the current FTIP before advertisement. Districts must initiate the programming process through the Division of Transportation Programming.

LOCALLY FUNDED PROJECTS

A locally funded project cannot be advertised until all cooperative agreement(s) are fully executed and approved by Legal Division.

If local federal funds are involved (CMAQ, RSTP, etc.), an "Authorization to Proceed," Form E-76, must be approved before the project can be advertised. This form is prepared by the district and transmitted electronically to Headquarters Division of Local Assistance for approval and processing.

ASSIGNMENT OF PROJECTS

There are several periods during the year when the workload in DES-OE exceeds its capacity to meet target milestone completion dates for all projects. When these peak workload periods occur, projects that have not been scheduled through XPM are processed in accordance with statewide priorities. DES-OE will keep its commitment to deliver projects scheduled in advance through XPM if delivered complete and on schedule.

RISK ADVERTISEMENT

See Section 3.6.5.

8.6 PROJECT MONITORING TOOLS

APPOINTMENT REPORTS

DES-OE publishes a monthly Appointment report to assist the districts with punctual submittal of PS&Es to DES-OE. The reports are distributed via e-mail and the Intranet to District Deputy Division Chiefs for Program Project Management. The report shows the target and actual PS&E submittal dates for the current fiscal year and facilitates district monitoring of PS&E submittal performance. Submittal performance has a direct impact on RTL delivery performance and begin construction date.

WEEKLY STATUS REPORTS

DES-OE produces and distributes a Weekly Status Report to provide scheduling information to district and HQ managers for projects being processed by DES-OE. Project status information is shown for all PS&Es currently being processed by DES-OE. Initial target dates for major projects delivered on schedule or early are established based on the Ready-to-List target date shown in XPM to ensure RTL target dates are met. Major projects delivered late will have target dates based on processing time shown on the DES-OE Duration Estimating Table.

DES-OE INTERNET INFORMATION

The DES-OE Internet site contains information on currently advertised and awarded roadway and structure projects on the California Highway System. This information consists of complete advertised sets of plans, special provisions, addenda, Federal Wages, Standard Plans, Standard Specifications, Asphalt Price Index, Construction Cost Index, Historical Cost Data, Bid Results, Plan Holders Lists, Bid Locations, Bidder Inquiries, and Award status. See Appendix D, "Websites," for a listing of useful sites.

Section 9 Funding Package

9.1 PURPOSE

This Section provides funding information, requirements, roles, and responsibilities for delivery of a complete Funding Package. A complete Funding Package will assist the Department to effectively advertise and award construction contracts in a timely manner.

9.2 BACKGROUND

The State Contract Act requires the Department to verify sufficient project funding before advertisement. Apportionment to funding sources must be properly identified or fund authorizations cannot be completed in a timely manner before award.

Previously, the district PS&E submittal to DES-OE consisted of funding information scattered throughout the PS&E Cover Memorandum and Attachment A, with copies of the funding documents, like the Request for Funds, submitted along with other project related documents (for example, the Right of Way Certification letter, permits, information handouts, project plan review checklists, etc.).

The Funding Package was implemented by DES Decision Document 39 in the interest of consolidating the various pieces of funding information into one collective document. It serves as a checklist of items needed to obtain the project funding. It identifies the various project funding sources and allocations in a clear, concise, comprehensive manner. It includes the supporting documentation necessary for securing each fund. The result should be a complete and detailed statement of how the project is to be financed.

9.3 ROLES AND RESPONSIBILITIES

PROJECT MANAGER

- Ensures that all project funding requirements are identified and resolved on time, consistent with the Ready-to-List target date, and ensures that DES-OE has the latest status of the funding requirements at all times.
- Ensures that project is included in FTIP/STIP for federally funded projects.
- Obtains written verification from each affected fund manager and any external entity (as applicable) IF fund splits due to savings or overages are to be different from the initial fund splits at the time of advertisement. The verification must be accompanied by detailed instructions on how funds are to be charged if the bids come in over or under the estimate.
- Verifies that sufficient funding is available to cover the project estimate of cost. This verification is performed before advertisement as well as bid opening.

- Ensures that DES-OE requests for action or additional funding information are completed in an expeditious manner.

9.4 FUNDING SOURCES

While some projects are funded entirely from one source (State, federal, contributor, local assistance, maintenance, etc.), most projects are funded by a combination of two or more of the following sources.

FEDERAL AID

The majority of projects are funded with State and federal funds, and the percentage of the total cost to be paid by the federal government (reimbursement rate) is determined on a project-by-project basis.

STATE FUNDING SOURCES

State funding is divided into programs. Each program is for a particular type of construction or repair.

CONTRIBUTOR FUNDING SOURCES

Funding from cities, counties, or regional agencies is referred to as contributor funding. The amount of funding from a contributor is found in the cooperative agreement that should indicate what the contributor has agreed to pay for construction costs. Projects may be 100% contributor funded or the contributor may pay only a portion of the construction costs. The contribution may be a fixed (lump sum) amount, a percentage of the total, or specific items of work only.

LOCAL ASSISTANCE FUNDING

Local Assistance funding is federal money for local agency use on State highway projects. Referred to as local federal funds (or subvention reimbursement), these include CMAQ, RSTP, demonstration funds, etc. A cooperative agreement in which the local agency authorizes the Department to use its Federal Highway Trust funds, as well as a Local Assistance Finance Letter, are required funding documents.

Federal Highway Trust funds must be matched by a State or local contribution. Therefore, "Matching Funds" are funds supplementing the federal participation on a Local Assistance funded project. This amount may be provided by the State or the local agency (in the form of measure funds, developer fees, etc.).

MAINTENANCE

Maintenance funds are State funds only. A maintenance project will have maintenance funding only, and no other source.

9.5 FUNDING DOCUMENTS

- Request for Funds. Required for State and/or federal funding on capital outlay projects (Minor "A," Majors such as STIP and SHOPP).
- "Budget Verification of Highway Maintenance Funds" form. Required for Maintenance projects.
- "Budget Verification of Minor 'B' Funds" form. Required when Minor "B" funds are to be used on a project.
- "Budget Verification for Special Funded Projects" form. Required when special funds not voted by the CTC are to be used on a project.
- Cooperative Agreement. Required when a local agency or outside contributor is providing construction funds. Cooperative agreements are legally binding contracts when fully executed and approved by Legal Division and assigned a six-digit State document number.
- Local Assistance Finance Letter. Required for local programmed federal aid on State highways. Finance letters are authorized by the Division of Local Assistance.

9.6 PROJECT ESTIMATE OF COST

The project estimate of cost is the basis for determining the amount of funding needed to construct the project. It should be prepared using the Basic Engineering Estimating System (BEES) and should reflect all funding sources and participation levels.

For those projects with contributor funding, segregated cost estimates are typically needed. Segregated cost estimates should show the funding responsibilities of the various partners on the project. See "Segregated Estimates" in Section 7.

9.7 SUBMITTAL COMPONENTS

A Funding Package is required for every project submitted to DES-OE for advertising and award (this includes informal bids projects, maintenance, Minors, and Majors such as STIP, SHOPP, seismic, locally funded, toll projects).

All funding sources and allocated amounts associated with the construction phase of the project must be identified in the Funding Package's Summary table, which serves as the cover sheet for the Funding Package. Pertinent information, notes, and explanations should be included on the cover sheet. This includes the program name and program code, fiscal year, CTC vote date, and status of funding including actual, target, effective and expiration dates. Supporting funding documents must accompany the Funding Summary table, such as:

- Copies of all fully executed fund verification documents supporting each funding source. See "Funding Documents" above.
- A description of how funds are to be charged, if the bids come in over or under the estimated amount. The district must obtain a verification letter (or e-mail) from each affected fund manager, if fund splits due to savings or overages are to be different from the initial fund splits at the time of advertisement.
- A copy of the BEES file is to show the current estimate of the project. When applicable, the BEES must be segregated showing how the fund splits are applied to the contract items, supplemental work, State-furnished materials and expenses, etc.

Note that the funds available for the project should at least be sufficient to cover the project estimate of cost.

The template of the Funding Summary table, instructions, and an example Funding Package can be downloaded from the DES-OE intranet website, shown in Appendix D, "Websites."

9.8 SUBMITTAL INSTRUCTIONS

The Funding Package should be submitted at the time of district PS&E submittal to:

- DES-OE (all projects processed by DES-OE)
- HQ Division of Local Assistance (if measure/local federal funding involved)
- HQ Division of Maintenance (if HM maintenance funding involved)
- HQ Division of Budgets (all projects except Maintenance)

9.9 REFERENCES

- Project Development Procedures Manual
- Local Assistance Procedures Manual
- Cooperative Agreement Manual
- Accounting Manual
- Reimbursement Manual

Section 10 PS&E Submittal Requirements

10.1 PURPOSE

This section describes the requirements for PS&E submittals and includes requirements for the accompanying Cover Memorandum. Informal bids projects have additional requirements as described in Section 12, "Informal Bids Projects."

10.2 ROLES AND RESPONSIBILITIES

The DOE is responsible for transmitting PS&E submittal information.

10.3 PS&E SUBMITTALS

DOE sends PS&E submittals to both DES-OE and to other involved Divisions such as Budgets, Maintenance, Traffic Operations, Design, and Right of Way (Railroad Agreements), and FHWA (for full oversight projects).

PS&E SUBMITTALS TO DES-OE

Districts will be credited with a PS&E Delivery Date when the minimum applicable electronic transmissions, sent by the DOE, are received by DES-OE as described below. These documents are expected to be included in the initial DOE Electronic PS&E Submittal to DES-OE. Acceptable formats are listed in Table 10-1, "Requirements for PS&E Submittal to DES-OE." Documents may also be sent by facsimile to (916) 227-6214.

PS&E Submittals are to be sent as follows:

1. DOE transmits the PS&E Submittal documents from the DOE computer to the PS&E Drop Box via Internet Explorer web browser (see Appendix D, "Websites"). If the scanned document is illegible, a hard copy should be sent to DES-OE, Attention: DES-OE Scheduling Engineer.
2. DOE sends a notification of the initial PS&E Submittal to the e-mail address: "DES-OE Submittals" with a cc to the DES-OE Area Senior Engineer or Special Projects Engineer. Do not attach the submittal documents to this notification e-mail unless directed by DES-OE staff.

The PS&E Submittal documents required for each Service Level are listed in the following Table:

Table 10-1
Requirements for PS&E Submittal to DES-OE

Applicable PS&E Submittal Items	Item Format	Required in PS&E Submittal?	
		Service Level 1	Service Level 2 Job File
PS&E Submittal Cover Memorandum	AA	Yes	Yes
Signed RTL Certification (draft for Service Level 1 and final [sealed] for Service Level 2)	AA	Yes	Yes
QC/QA Plan	AA	No	**Yes
Electronically Submitted PS&E Submittal Cover Memorandum and RTL Certification information	FMP	Yes	Yes
DOE and Structure CADD Submittal Form	AA	Yes	Yes
Project Plan Review Checklist	AA	Yes	Yes
Special Provisions	MSW	Yes	Yes
Non-Standard SSP Approval	AA or MSW	Yes	Yes
Combined Roadway and Structure File of BEES	AA or B	Yes	Yes
Special Provisions Signature and Seal Sheets	AA	Yes	Yes
PE's Certification Letter of Utility Facilities for High/Low Risk with Seal and Signature	AA	Yes	Yes
Funding Package	AA	Yes	Yes
Right of Way Certification	AA	Yes, L	Yes
Railroad Clearance Memorandum and Railroad Clauses	AA or MSW	L	Yes
Permits and Agreements	AA	L	Yes
Information Handout	AA	L	Yes
Justifications Letters for Deviation from Standards and Policy	AA	L	Yes
Signed Authority to Advertise	AA	No	Yes

Notes:

"YES" indicates required electronic transmissions.
"NO" indicates that the item is not required for PS&E submittal.

"L" indicates documents, if required, that may be submitted later.

** Indicates items not required for AADD projects.

Item Format: MSW=Microsoft Word 97, FMP=Filemaker Pro, AA=Adobe Acrobat, B=BEES System

After the DOE Electronic PS&E submittal documents are received and verified by DES-OE, this information will be available in the "Submittals" directory via web browser (see Appendix D, "Websites").

PS&E SUBMITTALS FROM DOE TO OTHER DIVISIONS

DOE is also required to send PS&E Submittal information to other applicable Divisions. Copies of the "PS&E Submittal Package" or portions of it required by various Divisions are to be submitted directly to those involved at the same time the initial DOE Electronic Submittal to DES-OE is made. See the listing of Divisions at the end of the PS&E Submittal Cover Memorandum in Appendix B, "Forms and Miscellaneous Information." Delete cc's that are not involved in the project.

PS&E SUBMITTALS FROM DOE TO FHWA

DOE sends a copy of the PS&E Submittal Package FHWA for federally funded full oversight projects. See Section 7, Chapter 2 of the PDPM for determination of FHWA oversight. Note that the designation "Exempt" is now changed to "State Authorized," and the designation "Non-Exempt" is now changed to "Full Oversight."

10.4 SERVICE LEVEL 1 SUBMITTALS - ADDITIONAL INSTRUCTIONS

PROJECT PLANS

Identify CADD-generated plan sheets to be transferred electronically using the PS&E CADD Submittal Form (see Appendix B, "Forms and Miscellaneous Information"). State the number of CADD-generated plan sheets sent electronically in the space provided on the Cover Memorandum.

DES-SD is to submit CADD-generated structure final contract plan sheets electronically to DES-OE. Final structure plans prepared by local agencies or consultants are to be sent to DES-SD for final processing.

REGISTERED ENGINEER'S SIGNATURE AND SEAL SHEET

Submit Signature and Seal sheets for the special provisions under separate cover. These sheets, as shown in Appendix B, "Forms and Miscellaneous Information," have four elements:

1. Contract number.

2. Design Oversight Approval. This block is to be used when the project, or any portion of the project specifications, has been developed by a consultant or local agency. The block must bear the printed name, signature, professional registration number and approval date of the licensed person providing design oversight for the entire project.
3. The statement "The Special Provisions contained herein have been prepared by or under the direction of the following Registered Persons."
4. Space for signatures and seals for each professional discipline involved in the project. The signature and seal lines must bear the signature, registration seal, license number, and license expiration date of the licensed person knowledgeable about and in responsible charge of the specific work for each professional discipline involved in the project. Professional disciplines may be:
 - Highway
 - Traffic
 - Landscape Architecture
 - Electrical (highway)
 - Electrical (structure)
 - Structure
 - Mechanical
 - Architectural

If SOE prepares a portion of a project's special provisions, they shall submit a completed signature and seal sheet to the district with their proposed final project special provisions. The DOE will combine the project special provisions and submit both the DES-SD and district signature and seal sheets to DES-OE with the PS&E Submittal.

10.5 SERVICE LEVEL 2 SUBMITTALS - ADDITIONAL INSTRUCTIONS

AUTHORITY TO ADVERTISE

This form shall be completed and signed by the District or Regional Director.

PROJECT PLANS

The project plans shall be submitted in TIFF format, and a CADD submittal form shall be completed and sent to notify DES-OE of the submittal and the address for retrieval of the

project plans. The plans shall be numbered to include any Revised Standard Plans (RSPs) and New Standard Plans (NSPs). The title block and plans approval date information and federal aid number, if applicable, shall also be completed.

SPECIAL PROVISIONS

The special provisions shall be submitted in conformance with Section 6, "Specification Preparation."

ENGINEER'S ESTIMATE

The Engineer's Estimate shall be the final form and initialed to indicate verification.

INFORMATION HANDOUT

A legible copy of the Information Handout with cover sheet consisting of permits and materials information should be placed in the submittal.

JOB FILE

The DOE must submit the hard copy of the Job File using overnight mail to DES-OE concurrently with the transmittal of the electronic PS&E Submittal. The Job File shall be bound by a two-hole fastener. The Job File shall contain the documents in Table 10-1.

10.6 COVER MEMORANDUM

The PS&E Submittal Cover Memorandum (Cover Memo) serves as a transmittal letter for the PS&E Submittal and a means of sending PS&E Submittal Packages to others. The Cover Memo should be complete and concise. The submitted information determines DES-OE processing of the project. The Cover Memo is to be signed by the District Office Engineer and the Project Manager.

The PS&E Submittal Memorandum and RTL Certification Input Form (Form) can be obtained from DOE who provides assistance in preparing and submitting the Form. DOE is required to use the Form, available in the Submittal Database to submit projects to DES-OE. A recommended procedure for preparing and submitting the PS&E is as follows:

The PE obtains a Form from the DOE. The Form contains preparation instructions. If the PE has any questions, the DOE should assist.

The DOE inputs the information into the Submittal Database and prints either the Draft (Service Level 1) or Final (Service Level 2) RTL Certification for completion and signature.

The signed Cover Memo and RTL Certification are sent by FACSIMILE or scanned and e-mailed to DES-OE with the rest of the PS&E submittal package and to other divisions as required by the PS&E distribution list which is an attachment to the Cover Memo.

The Cover Memo includes a section, "Performance Indicators." HQ Divisions have requested DES-OE to track these indicators and provide quarterly reports on district performance.

To assist the district in filling out the information, the various parts of the Cover Memo are described below:

PRIORITY SUBMITTAL

DES-OE processes informal and safety (Program 010) projects as the first priority. Service Level 1 projects are assigned the same day the submittal is complete. Indicating the submittal as a safety or informal project will facilitate project assignment and processing.

SERVICE LEVEL

The service level determines the level of DES-OE effort requested by the district (see Section 3.5.1 and 3.5.2).

PROJECT INFORMATION

Identification

Information required for project processing, advertisement, award, funding, federal fund participation, etc. The information is taken from the program documents, etc.

Description

Same as the project description on the title sheet.

Type of Work

Type of work shown in the programming document or the BEES.

Work Category

Indicate the category as stated in the programming document.

Type

Indicate the specialty work involved. For example, a roadway project with landscape and electrical items in it will have those items checked.

Approval

This is the expenditure authorization from the project report and the Project Approval/Environmental Document date.

Personnel

List the names of the personnel involved in the preparation of the PS&E. The information is needed for communication purposes.

Schedule

Indicate the current XPM target date for RTL and the recommended advertisement and begin construction dates based on RTL, funding, and construction window.

TARGET DATES FOR INCOMPLETE SUBMITTAL

Incomplete requirements listed in Sections 1 to 5 of the RTL Certification should be indicated and listed in this section of the Cover Memo:

Right Of Way

2a Indicate the certification number and target date when it has not been executed or obtained.

2e This is the same for the railroad clearance.

Environmental

3 Indicate the certification number and target date when it has not been executed or obtained.

3e List all the due or pending permits and agreements with the target dates to be provided to DES-OE.

Design

4c List the applicable policy requirements and the exception approval target dates. See Section 1.3.4 for the list of policies that may apply to the project.

4d List all the agreements (cooperative and any others) that are due or pending.

FHWA

5a Indicate if the approval of the final PS&E has not been received and the target date of the concurrence.

5b Indicate if any of the items listed in Section 1.3.5b is included in the project. Indicate the approval target date for the PIF being obtained.

PERFORMANCE INDICATORS

These are data to be collected for the Department's evaluation, information, dissemination, reporting purposes, etc.

Environmental

None required.

Design - Resident Engineer (RE) Pending File

Indicate the submittal target date but no later than the RTL date to the Construction RE.

Design - Salvageable Materials

List the salvageable materials used for the project, if any.

Design - Landscape

Erosion Control

Indicate the number of hectares of each type of Erosion Control. These figures are tracked to determine the Department's ability to meet its water pollution control goals.

Wildflower Seeding

Indicate the number of square meters of Wildflower Seeding. **Do not** include any wildflowers included in Erosion Control applications. If no seeding is applied on this project and it is required, indicate the value of wildflower seeding to be tracked for another project. The value is calculated as .25 of 1% of the total value of planting and irrigation. These figures are used to determine if the Department is meeting its federal mandate for wildflower planting.

Ground Cover

Indicate the number of hectares of ground cover plants or shrubs that will provide soil stabilization. Estimate how long it will take to completely cover the planted area, based on plant spacing and growth rate. Indicate the estimation as one year or less, or more than one year. These figures are tracked to determine the Department's efforts to meet its water pollution control goals.

Trees

Indicate the number of trees, seedlings, branch cuttings, and acorn plantings on the project. This figure is reported to the Department's public relations office.

Compost

Indicate the number of cubic meters of compost used with Erosion Control applications and planting operations. These figures are reported to the California Integrated Waste Management Board as compost, and are identified as recycled materials which are tracked towards the Department's recycling efforts.

Mulch

Indicate the number of cubic meters of mulch used from processed green material and from wood chips, or bark. These figures are reported to the California Integrated Waste Management Board, as they are identified as recycled materials that are tracked towards the Department's recycling efforts.

Mulch (Inert Material)

Indicate the number of square meters of inert materials used as ground cover. Areas of loose cobble, compacted decomposed granite, and gravel reduce the need for pesticide use. This figure is tracked to determine if the Department is meeting its pesticide reduction goals.

Recycled Water

Indicate if the project will use recycled water, and the level of treatment. Indicate the estimated annual recycled water use for the project. This figure is tracked to determine if the Department is meeting its water conservation goals.

Highway Planting

Indicate the number of hectares of planting and irrigation work required due to new road construction, due to deterioration of prior planting and irrigation, or planting as a mitigation requirement.

Worker Safety

Indicate the number of access gates and maintenance vehicle pullouts provided on this project. Indicate the number of meters of maintenance access roads provided. Indicate the square meters of slope paving, paving of narrow areas and extended gore areas. These figures are tracked to determine the Department's efforts to meet its maintenance worker safety goals.

Traffic Operations

Deputy Directive 60 requires Traffic Management Plans (TMPs) for all construction projects. The Division of Traffic Operations will track district performance on this requirement using data shown on the Project Submittal Cover Memo. Indicate the date the District Traffic

Manager or Traffic Management Plan Manager verified that all the necessary TMP elements are included in the PS&E package and that person's name.

FUNDING

Programming Document

Choose the correct document from the pull down menu.

Program Code

The code as shown in
http://onramp.dot.ca.gov/hq/accounting/Coding_Manual1/ch07_2_20.html.

Budget Year

The year the project's construction fund is budgeted for.

CMAQ

Indicate whether the project is eligible or not. If so, provide an emission reduction study to the Division of Budgets, Office of Federal Resources.

FEDERAL PARTICIPATION

Oversight Determination

Indicate whether the project is State authorized or full oversight regarding FHWA review and oversight. If full oversight, the name of the FHWA Engineer and the date the determination was made is to be shown. See PDPM Chapter 2, Figure 2, for determination of FHWA oversight. Note that the designation "Exempt" is now changed to "State Authorized," and the designation "Non-Exempt" is now changed to "Full Oversight." Contact the appropriate FHWA Engineer to confirm the determination.

For Federal Aid Projects

List the structure name, number, type, begin and end stations. This information is to be provided by SOE.

PS&E INFORMATION

Plans

Indicate what version of Standard Plans was used to prepare the project plans. Indicate the number of roadway, structure, and total plan sheets.

Specifications

Indicate what version of the Standard Specifications or General Conditions was used to prepare the special provisions.

Construction Window

Construction window is the permitted dates when construction can occur. These construction constraints could be a requirement from permit conditions, environmental, temperature for AC or seal coat placement, public events, coordination with other projects, etc. Indicate the dates in the block provided.

Information Handout

Identify all information for the project that is to be provided as a handout to prospective bidders. Indicate the actual or target date the information is to be submitted to DES-OE and list the items involved. See Appendix B, "Forms and Miscellaneous Information" for an example of Information Handout Cover.

The materials to be included in the information handout specify restrictions and requirements or provide additional information necessary for contractors to bid the work. Only 216x279 mm, single sided, black and white handouts may be included. Handouts are to be limited to approximately 100 sheets total or a maximum of 25 mm thick. Otherwise, handouts should be made available in the district or provided on CD.

DES-OE will reproduce the information handout and provide copies to prospective bidders upon request in the same manner that it furnishes plans and other contract documents. Documents to be included in the Information Handout include:

Permits or Agreements

Although copies of the permits are part of the information handout, the permits should also be listed in the permit section (environmental section) of the Cover Memorandum. Typically, permits may be required from the following Agencies:

- Department of Fish and Game. See the Contract Requirements, Section 1601 of the California Fish and Game Code.
- California Regional Water Quality Control Board.
- United States Army Corps of Engineers.
- Coastal Commission.
- Coast Guard.

- State Lands Commission.
- Reclamation Boards.
- Water Districts.
- Bay Conservation and Development Commission.
- Tahoe Regional Planning Agency.
- Transit Districts.
- United States Forest Service.
- United States Fish and Wildlife Protection Agency. See Fish and Game Code, Division 3, Chapter 1.5, Article 4.
- Tribal Employment Rights Ordinances.

Materials Information

Optional Disposal Sites: Sites for disposing residue from grinding or grooving the surface of AC or PCC pavement and bridge decks must be submitted to DES-OE for inclusion in the information handout. Generally, the information should include:

- Cover page with project information.
- Index of accompanying information.
- Maps of Sites.
- Copies of agreements with owners (if applicable).
- Copies of use permits and clearances or MOUs (when they have been obtained by the State).

Water Source Information: If a project will require significant amounts of water and is in an area under drought conditions or subject to water shortages, a water source information handout is to be provided to help prospective bidders locate possible water sources. Submit to DES-OE reproducible copies of correspondence and other documentation for all arrangements, whether formal or informal, that have been made to secure water needed for the project.

Summary of Foundation Recommendation Reports: Foundation recommendations, foundation review forms, pile indicator reports, driveability

studies, and other pertinent structure foundation related materials must be submitted to DES-OE for inclusion in the information handout. See the memo, "Foundation Data as Materials Information," from James E. Roberts dated November 16, 1994.

Notice To Contractors

Cross Sections

Cross sections will be made available to bidders in print only, electronic only or print and electronic when the project meets the criteria set forth in the Division of Design's Cross Sections Memorandum. Indicate which one applies. Provide an exception approval when deviating from this policy.

The project will not attain the RTL milestone unless DES-OE has received a verification memo stating that the District Duty Senior has received the cross sections.

Bidder Inquiries

Indicate whether bidder inquiry will be submitted using the "Bidder Inquiry" form. If so, provide the Duty Senior FACSIMILE number.

Prosecution of Work

Construction Working Days

The number of working days provided to finish the work excluding the plant establishment period. See "Discussion of Selected Special Provisions" in Section 6 for points to consider when determining the number of working days.

Plant Establishment Working Days

The number of working days provided to establish plants and maintain irrigation systems. Type 1 plant establishment begins when all construction work ends. Type 2 plant establishment begins whenever the Resident Engineer indicates a begin date to the Contractor.

Total Working Days

The total sum of the construction and plant establishment (if applicable) working days.

Liquidated Damages

The expense to the State due to the Contractor's failure to complete the contract within the specified time. See "Liquidated Damages" in Section 6.10 for the formula to calculate liquidated damages.

Special Features

Asphalt Concrete QC/QA (SSP 39-050)

Required for all projects with 10,000 tonnes of AC. Provide a copy of the approval with the project submittal if the project deviates from the requirement.

Aerially Deposited Lead Site Reuse

Indicate if the project deviates from the requirement set forth in SSP 19-900. Attach approval with the submittal.

Design Sequencing

This is a method of contracting where the design is not complete. It is a pilot program under Assembly Bills 405 and 2607 that allowed the Department to use Design Sequencing on 12 projects. Provide a copy of the approval with the project submittal if the project is not included in the program and uses the design sequencing concept.

Escrow of Bid Documentation

Allowed to be used on design sequencing projects. Provide a copy of the approval with the project submittal if the project uses this requirement.

Experimental Work Features

When research is to be performed to compare new materials or processes, approval of the use of experimental features must be obtained. For federal aid projects, a Construction Evaluated Project Work Plan must be approved by the Division of Design for FHWA prior to Certification of RTL.

Pre-Award Qualifications

Allowed to be used on design sequencing projects. Provide a copy of the approval with the project submittal if the project uses this requirement. See the memorandum, "Pre-Bid and Pre-Award Qualifications Provisions," from Robert Buckley dated March 22, 2002 in regard to the approval requirement for use on other projects utilizing this requirement.

Tribal Employment Rights Ordinances (TERO)

Required for projects with limits in particular tribal lands. District will provide the revisions to Sections 1, 2, 3 and 5. See Deputy Directive, DD-74R, "Tribal Employment Rights Ordinances" (TERO) for other requirements.

Value Analysis

Required for all projects over \$25 million. Provide a copy of the approval with the project submittal if the project deviates from the requirement.

Estimate

Indicate the total cost, number of contract items, the BEES keyword and the call out number. See http://projdel.dot.ca.gov/des/documents/decisiondocs/call_out_number.pdf on how to round the contract items subtotal for use as the call out number.

LIST OF ATTACHMENTS

Indicate the attachments that apply, and include them with the submittal.

PS&E Distribution List

Indicate and provide the applicable document to Divisions that are identified.

Section 11 DES-OE Draft Contract Document Processing

11.1 PURPOSE

The purpose of this Section is to define and describe the DES-OE draft contract (DC) document preparation process and activities for Service Level 1 project submittal. It is also to ensure that the Department's personnel know their roles and responsibilities in processing the district PS&E to Draft Contract Ready (DCR).

DES-OE is responsible for the final preparation and processing of Service Level 1 PS&E submittals as final contract documents.

11.2 ROLES AND RESPONSIBILITIES

DES-OE AREA SENIOR

- Assigns the district PS&E as staff becomes available.
- Facilitates the preparation and approval of non-standard special provisions, non-standard edits to an SSP and/or non-standard project plans.
- Reviews, concurs, and sends the "District PS&E Quality Feedback" form to the DOE.

DES-OE SPECIFICATIONS ENGINEER

- Verifies that the final project plans, specifications and estimates are complete, consistent, biddable and buildable.
- Ensures statewide uniformity of contract bid documents.
- Ensures conformance with Department policies, procedures, standards, and requirements in the RTL Certification.
- Provides draft contract comments to the District Specification Engineer.
- Incorporates the District Response (DR) into the draft contract documents.
- Prepares and provides the completed "District PS&E Quality Feedback" form to the DES-OE Area Senior.
- Recommends finalization of the RTL Certificate.

PE AND DISTRICT OVERSIGHT ENGINEER

- Promptly provides additional information or clarification requested by DOE or DES-OE.

- Obtains concurrence from the FHWA Engineer to any major changes made after PS&E submittal.

DOE

Ensures that any additional information requested by DES-OE during the preparation of the final contract documents, is furnished complete and in a timely manner.

11.3 PREPARATION OF DRAFT CONTRACT DOCUMENTS

DES-OE verifies that the PS&E submittal is complete, consistent, and in conformance with current standards, policies, and legal and administrative requirements. Verification is based on the requirements in Sections 5, 6, and 7 of this Guide. DES-OE summarizes the comments that may include deletions, additions, corrections, updates and other required changes, or requests approval of non-standard components of the district PS&E. DES-OE will send by e-mail the Draft Comments Memorandum to the district through the e-mail.

DES-OE then prepares the final contract documents using the information in the PS&E submittal and the DR to the DC. Before any changes to the project plans, specifications or estimate are made by DES-OE, they are first reviewed with the DOE for concurrence. The DOE is to verify or obtain the concurrence of the Engineer or Architect of Record and notify DES-OE.

11.4 DISTRICT RESPONSE TO DES-OE DRAFT CONTRACT COMMENTS

RESPONSE MEMO

The DOE is to completely address each comment in the DC Comments Memorandum. The DOE is responsible for forwarding the DC comments and incorporating the responses from district functional units, including SOE. DOE sends a Response Memo to DES-OE by e-mail to facilitate timely completion of the draft contract ready milestone.

If necessary, district and DES-OE personnel may meet in Sacramento or another convenient location to resolve remaining contract issues. The DES-OE Specification Engineer assigned to the project documents the meeting or telephone discussions in a memorandum to file with a copy to the district.

PLAN REVISIONS

The DOE is to note and explain redline plan sheets, added originals, and replacement originals in the Response Memo.

When submitting district proposed plan revisions or plan revisions requested by DES-OE after PS&E submittal, follow these guidelines:

- Notify the project DES-OE Specifications Engineer, in writing or by e-mail, that revisions are being submitted.
- Submit "redline" prints which clearly indicate the proposed or requested plan revisions.
- Submit a new PS&E CADD Submittal Form with the revised originals, and identify it as a "Revised Submittal" in the appropriate box at the top of the Form.

SPECIAL PROVISIONS REVISIONS

Requested contract special provisions revisions are to be submitted in a format similar to that used for addenda (see Section 13, "Contract Addendum Requests") with the revisions and their locations specified. The DOE and SOE should provide any substantially revised SSPs, SSP updates with extensive edits, and additional SSPs as an individual electronic file with the District Response Memo.

ESTIMATE REVISIONS

Estimate revisions are to be made by DES-OE and are to be indicated in red. When an item is deleted or a new item is added, the district with concurrence from DES-OE is to revise the BEES electronically and submit a copy of the revised BEES with the District Response Memo. This is to avoid errors in renumbering the other items affected by the deletion or addition to the estimate. The DOE is to explain the deletion, addition and revisions in the Response Memo.

11.5 REVISIONS AND CHANGES

MAJOR REVISIONS

When districts need to make major revisions to the PS&E submittal after DES-OE sends the draft contract comments, the "PS&E Received Date" and the other milestones that follow will be adjusted accordingly. A DES Project Change Request (DES-PCR) will be processed to document the adjustment of the affected dates. See the memo of February 28, 2003, "Major Revisions Impact on CTC Allocations and RTL Dates."

Major revisions consist of the major changes listed below. In addition, replacement or addition of plan sheets that are 10% or more of the total number of plan sheets submitted at PS&E, will be considered major revisions.

CHANGES TO FEDERAL AID PROJECTS AFTER PS&E SUBMITTAL

After PS&E submittal to DES-OE the district may need to make a major change in any project where full federal oversight is required. The FHWA Engineer must concur in the changes before the project is considered draft contract ready and RTL. See the Decision Document, "Include FHWA Design Approval in RTL," dated June 2, 2003.

MAJOR CHANGES

Major changes consist of any one or more of the following four items:

1. Changing the scope of the project, for example:
 - Inclusion of a sole source or proprietary item.
 - Revision of standard design features or specific project design elements of the mainline, ramps, frontage roads, crossroads, and significant detours.
 - Structural section changes and changes in access control.
 - Change in specified material borrow or disposal site.
2. Addition, deletion, or relocation of major structures.
3. Adding, deleting, or in any way changing work stipulated by written agreement between the Department and a private party, corporation, utility, or other governmental unit; or generating any new work under the contract that requires written agreement. This includes any environmental commitment mitigation within the limits of the project.
4. Increasing by \$200,000 or more either the total contract item cost or the approved supplemental work in the Engineer's Estimate.

MINOR CHANGES

Corrections to plans and specifications that do not affect the scope of the project are not major changes. Minor changes merely clarify the drawings or specifications so bidders can more clearly understand the work, quality of materials, or performance required to bid and to construct the project.

Examples of minor changes:

- Plans - Adding or deleting details, notes, dimensions, or drawings to clarify instructions, to supplement other drawings, or to eliminate conflicts between notes, dimensions, and drawings; deleting a Standard Plan that is not needed for the proposed work.
- Specifications - Correcting typographical errors; adding missing specifications which correspond to the work shown on the plans; correcting conflicting provisions; making changes to clarify ambiguous requirements.

If the district is unsure whether a proposed change constitutes a major change, the change should be discussed with the FHWA Engineer or treated as a major change and processed as indicated above.

11.6 DRAFT CONTRACT READY

The district PS&E is considered draft contract ready when the DR fully satisfies the DC comments. See Figure A, "RTL Process" in Section 1.

11.7 DISTRICT PS&E QUALITY FEEDBACK

The "District PS&E Quality Feedback" form (see Appendix B, "Forms and Miscellaneous Information") will be prepared for each project after the project is draft contract ready and provided to the district with the Draft Contract Ready Memo.

The "District PS&E Quality Feedback" form will be prepared for Service Level 2 and AADD at advertisement.

11.8 RETURN OF PROJECTS

Any project in DES-OE that has not progressed to the next milestone within three months will be returned to the district. The District Project Manager will be notified and the project returned through the DES-PCR process. See the Decision Document, "Return of Projects Not Ready For Advertisement."

11.9 PREPARATION OF FINAL CONTRACT DOCUMENTS

During the listing period, DES-OE Specification Engineer prepares the final contract documents for distribution to prospective bidders as follows:

- Incorporates revisions and additions to the contract special provisions.
- Adds appropriate (new or revised) SSPs.
- Consolidates various redline plan revisions onto one set of plan prints.
- Checks plan titles, sheet code letters, signatures, and seals.
- Adds final sheet numbering and the index of plan sheets to the Title Sheet.
- Checks the list of applicable Standard Plans and adds New or Revised Standard Plans, if necessary.
- Incorporate revisions to the BEES estimate.
- Submits the redlines for delineation into the final plans.
- Prepares the final Notice to Contractors, Contract special provisions and Proposal and Contract.

- Other activities performed by DES-OE during this period are shown in Section 1 of this guide.

11.10 RETURN OF REDLINE PROJECT PLANS

DES-OE returns the redlined roadway plans to the DOE and structure plans to SOE within a maximum of five working days after delineation of the redline corrections have been incorporated into the final project plans. See the memorandum, "Electronic Signatures," from R. P. Weaver dated January 30, 1995.

The DOE and DES-SD must make the returned redline prints available in their offices for review and verification by the responsible persons with their signature and seal on the plans. The redlined prints are to remain in the possession of the DOE and DES-SD until award of the project. After the project is awarded, the final CADD file is made available to the DOE and to the DES-SD. The redlined prints shall not be destroyed before concurrence from the Engineer of Record is received AND the contract is awarded.

11.11 ADVERTISING PERIOD

Activities performed by the DES-OE Specification Engineer include the processing of contract addendum requests discussed elsewhere in this guide. This activity is performed by DES-OE for all projects regardless of the Service Level it was processed under.

11.12 REJECTED BIDS / RE-ADVERTISEMENT

The PS&E for rejected bids will be sent back to the districts using the DES-PCR unless the district requests the project to be re-advertised. See Section 14, "District Recommendation for Award," for the process to follow in rejecting bids.

Projects with rejected bids will not normally be re-advertised without revisions made to the previously advertised contract documents. The district must inform the Scheduling Engineer and the DES-OE Area Senior whether to re-advertise or return the project.

11.13 REFERENCES

- Decision Document, "Return of Projects Not Ready For Advertisement."
- Decision Document, "Include FHWA Design Approval in RTL."
- Memorandum, "Major Revisions Impact on CTC Allocations and RTL Dates," dated February 28, 2003.
- Memorandum, "Electronic Signatures," dated January 30, 1995.

Section 12 Informal Bids Projects

12.1 PURPOSE

The purpose of this Section is to define and describe submittal requirements and processing for informal bids projects. It is also to define the roles and responsibilities of various functional units as they relate to informal bids PS&E submittal.

12.2 DEFINITION

An emergency contract is for services that are required to respond immediately to a sudden, unexpected occurrence that poses a clear and imminent danger, requiring action to prevent or mitigate the loss or impairment of life, health, property, or essential public services.

12.3 GENERAL

When an emergency exists, Informal bids processing is used to accelerate the project processing time from receipt of the PS&E in DES-OE to the start of work. This process waives some of the provisions of the State Contract Act allowing the Department to advertise and award contracts faster.

Informal bids projects are not exempt from statutory or policy requirements. A Director's Order may waive the requirements of PCC 10122 for public works contracts that are subject to PCC 10122 only. Waiver of any other statute requires a Governor's Emergency Proclamation or Executive Order suspending the operation of all contracting statutes and regulations. This usually occurs during a catastrophic emergency.

Projects processed for informal bids require a Director's Order, which is obtained with a Director's Order Request. The district is to notify DES-OE to discuss the tentative project schedule as soon as it is apparent that an informal bids project is to be submitted to DES-OE for processing. The project schedule includes the following information to be used for the Director's Order Request:

- PS&E submittal date.
- Advertising date.
- Bid opening date.
- Award date.
- Start of work date.
- Number of working days.

DES-OE will determine tentative advertisement, bid opening, and award dates based on the criticality of the project. Advertisement periods may be scheduled for as short as a few days or as long as two weeks. Award of the contract may take from one to seven days.

If the project is eligible for federal funding, a draft copy of the Director's Order Request is to be sent to the Division of Budgets, Office of Federal Resources. Also, attach to the draft copy of the Director's Order Request, a memorandum requesting preparation of a Public Interest Statement with a brief justification for inclusion in the Public Interest Statement, NEPA document and R/W Cert.

Director's Orders for informal bids will not be approved before receipt of the complete PS&E.

12.4 ROLES AND RESPONSIBILITIES

DEPUTY DIRECTOR, MAINTENANCE AND OPERATIONS

Approves the Director's Order.

DISTRICT DIRECTOR

Signs requests for the Director's Order to accomplish work by informal bids contract. This responsibility may not be delegated unless the District Director is absent by reason of illness or vacation.

CHIEF, DIVISION OF MAINTENANCE

Prepares the Director's Order and coordinates the processing with DES-OE.

CHIEF, LEGAL DIVISION

Reviews the Director's Order before approval to determine whether State Contract Act requirements are met.

CHIEF, DIVISION OF TRANSPORTATION PROGRAMMING

- Ensures approval of G-11 or funds request. See Appendix D, "Websites," for the link to this CTC resolution.
- Signs Director's Order.

CHIEF, DIVISION OF BUDGETS

- Reviews the Director's Order before approval when capital outlay funds are to be used.
- Processes the E-76 for federally funded projects.

- Ensures the PIF is processed when required.
- Ensures that G-11 or funds request is processed.

DES-OE

- Ensures the contract documents for informal bids contracts are properly prepared and approved.
- Coordinates the advertising, bid opening, and award to the lowest responsible bidder.

PE AND OVERSIGHT ENGINEER

Provides timely information or clarification needed by DES-OE.

DOE

- Ensures that informal bids PS&E submittals are prepared and processed in conformance with the Department's policies and procedures.
- Ensures the appropriate distribution of PS&E is made per the Cover Memo.

PROJECT MANAGER

Ensures that all advertising constraints have been cleared before the Director's Order approval.

12.5 PS&E SUBMITTAL REQUIREMENTS

Project plan delineation need not meet the same quality standards expected for a typical project. Hand drawn plans have been successfully used, but project plans developed on CADD are recommended whenever possible. PS&E quality for emergency projects should only be sacrificed in the interest of saving time. However, the district is still to submit PS&Es which, when used together, present the proposed work, and are consistent, accurate, and complete. Plans must be legible when reduced in size by 50 percent.

Emergency projects generally require highly expedited processing. In addition to the requirements described in Section 10, "PS&E Submittal Requirements" and Figure 12-1, "Informal Bids Contract Submittal Checklist," the district submits the following applicable information to DES-OE to expedite review and preparation of contract documents for informal bids projects:

- Identify submittal as Informal Bids Project on the cover page of the PS&E submittal.
- When PS&E is hand-delivered, provide a PS&E CADD Submittal Form and two sets of project plan prints. SOE will also provide a PS&E CADD Submittal Form and two prints of SOE plans, when applicable.

- Copy of the Director's Order or copy of Director's Order Request.
- If a pre-bid meeting is to be held, include the time, date, and location for the meeting (pre-bid meetings are not recommended for projects with short advertising periods).
- Identify the need for calendar or non-standard working days.
- Identify the need for non-standard work shifts, such as multiple work shifts i.e., double shifts.
- Provide calculations to justify higher than standard liquidated damages.
- PIF Statement (see Appendix B, "Forms and Miscellaneous Information") with Letters of Justification for less than three week-advertisement, use of force account (day labor), use of publicly owned equipment, use of State-furnished materials, mandatory use of borrow/disposal sites, use of patented and proprietary materials, waiver of Buy America provisions, and/or acceleration techniques added by contract change order. The PIF Statement must be processed through the Federal Resources Office, Division of Budgets.
- Contact Division of Budgets, Office of Federal Resources, for assistance in the preparation of Public Interest Findings for federally funded projects. In the PS&E submittal, identify the FHWA Engineer that provided the approval.
- Proposed incentive/disincentive clauses must be supported by quantified user savings to the public. Recommend a daily maximum and a project total. Include a copy of the incentive/disincentive calculations with the submittal. Deputy Director for Project Delivery approval is required for the use of Incentive/Disincentive clauses, if "A+B" bidding is requested.

12.6 PROCESSING

DES-OE gives the highest priority to informal bids projects . If necessary, DES-OE will suspend work on other projects that would delay or interfere with the progress of informal bids projects. In order to meet the negotiated target dates imposed for the expedited schedule, district and DES-SD personnel must make the same commitment. It is imperative that district and DES-SD PEs, specification engineers, and other appropriate staff members are available to respond quickly to DES-OE requests for information. This may include working evenings, weekends, and holidays unless arrangements are made to the contrary.

The processing time from receipt of PS&E in DES-OE to start of contract work for informal bids projects is typically 2 to 4 weeks.

12.7 ADVERTISEMENT

Some emergency projects are issued exemptions from State and local permits by an executive order from the Governor. Other selected emergency projects may require contract constraints to be cleared before bid opening and be advertised on a "risk" basis, that is, without all required documentation delivered to DES-OE. Typically, the goal is to advertise emergency projects one week after PS&E delivery to DES-OE. Projects will not normally be advertised until the following has occurred:

- Receipt of the complete District Response.
- Receipt of all permits and the Right of Way certification, and execution of any agreements.
- Receipt of materials information.
- An E-76 is required for federally funded informal projects defined as new or reconstruction on the Interstate following catastrophic failure. The E-76 must be dated no later than the advertisement date or federal funding may be forfeited.

A Director's Order and Funds Requests must be processed by the district and sent to the appropriate Headquarters Division as early as possible. Regardless of when the project is ready for advertising, projects cannot be advertised before execution of the Director's Order or before funds being allocated for the project.

Limited time is available for contractors to become aware of an informal bids project, obtain bid documents, and develop responsible bids. The district is to contact interested contractors capable of performing the type of work involved. Districts are encouraged to use the Department's Emergency Contractor Interest Registry (Appendix D, "Websites"). They should be informed about the general type of work and the "Call Out Number" of the project, and the tentative schedule (advertise, bid opening, start of work). Provide DES-OE with a list of 7 to 10 contractors who will be provided a bid package before the advertising date.

For federally eligible projects, do not contact any contractor until the Federal Authorization to Proceed (E-76) has been processed. Contacting a contractor before federal authorization will forfeit federal funding for the project.

Typically, on all but the most accelerated informal bids contracts, bid packages will only be made available in Sacramento. Contractors may request that the bid packages be mailed to them, free of charge, by overnight mail.

If the bid packages are distributed by the district, it is critical that the district keeps a complete and accurate record of all contractors who received bid packages and make this record available to DES-OE. If it becomes necessary to issue an addendum, DES-OE must provide a

copy of the addendum to all contractors who received bid packages, or it may be necessary to reject all bids and readvertise the project, even in an emergency.

On the most accelerated informal bids projects, the district must deliver bid packages (prepared by DES-OE) directly to interested prime contractors, where available, or make arrangements in advance for the contractors to pick up the bid documents in the District Office or Headquarters. When applicable, the District is to provide bidders with a list of DBE subcontractors.

12.8 BID OPENING AND AWARD

Depending on the criticality of the project, bid opening for informal bids contracts may be scheduled for any day of the week or any location. See Section 4.7, "Bid Opening and Award," for the regular bid opening days, locations, and the requirements for District Recommendation for Award.

12.9 REFERENCES

Public Contract Code 1102 and 10122, Streamlining the Director's Order Request and Approval Process Memorandum, Guidelines for Requesting Director's Order (Intranet site, http://onramp.dot.ca.gov/hq/maint/orway/ha23/children/do_guide/dog00.html) and Deputy Directive 26R.

Figure 12-1 Informal Bids Contract Submittal Checklist

The following item may be E-mailed to DES-OE:

- Electronic Specifications.

The following items may be sent by FACSIMILE, e-mail, or pdf format to DES-OE:

- Request for Director's Order.
- Request for Funds (G-11).
- Damage Assessment Form (DAF), (if applicable). See the "Major Damage Restoration Coordinator's Handbook" for information about DAFs.
- Signed Cover Memo and signed RTL Certification Form.
- R/W certification.
- Required permits and agreements.
- Railroad clauses.
- Materials information handout.
- Certification of High/Low Risk Utilities.
- Copy of the combined BEES.
- CADD submittal.
- Environmental Clearance.
- Engineer's Seal and Signature Sheet (for Special Provisions book).
- List of 7 to 10 bidders (see Figure 12-2 for an example).

A list of 7 to 10 Contractors who have been contacted and have indicated an interest in bidding the contract. They should be informed about the general type of work and the approximate total cost of the project, and the tentative schedule (advertising date, bid opening date, start work date).

The list should include:

- Company name

- Street address (not a PO box)
- Telephone number
- FACSIMILE number
- Contact person (if possible)

Figure 12-2
Example List of 7 to 10 Bidders

Hutchins Paving & Engineering, Inc. 7025 Eastside Road Anderson, CA 96007 Phone : (530) 246-4272 FAX: (530) 246-4279	Merser-Fraser 122 Plenum Road Eureka, CA. 95502 Phone : (707) 443-6371 FAX: (707) 443-6371 Call first
John N. Petersen, Inc. 1212 Arcadia Street Eureka, CA 95502 Phone : (707) 443-5661 FAX: (707) 733-5659	Roy E. Ladd Inc. 5432 Main Street Redding, CA 96099-2750 Phone : (530) 241-6102 FAX: (530) 241-5492
Arcadian Enterprises 52 Harmony Court Redding, CA 96089 Phone : (530) 275-4443 FAX: (916) 275-0706	Clemens Construction Co. 1800 Plinth Lane Redding, CA 96049 Phone : (530) 233-6593 FAX: (530) 223-0128
Tullis and Heller, Inc. 4455 Estuary Street Redding, CA. 96049 Phone (530) 241-5105 FAX: (530) 241-5570	Manning Construction Company 20063 Pontero Drive Redding, CA 96003 Phone : (530) 275-8356 FAX: (530) 275-5715
Barber Construction, Inc. 2115 Chexem Road Blue Lake, CA 95525 Phone : (707) 668-5688 FAX: (707) 668-4383	Stimpel Wiebelhaus Associates 7812 Huguenot Drive. Redding, CA 96049-2335 Phone : (530) 223-6605 FAX: (530) 223-3879
Churn Creek Construction Company 8537 Commercial Way Redding, CA. 96002 Phone : (530) 222-0107 FAX: (530) 222-0686	R. Brown Construction Company 45 Bianca Way Willow Creek, CA 95573 Phone : (530) 629-3702 FAX: (530) 629-2863

Section 13 Contract Addendum Requests

13.1 PURPOSE

The purpose of this Section is to define and describe the addendum request preparation process. It is also to ensure the respective units know their roles and responsibilities in addendum request processing. Addendum request processing must be given highest priority since time is of the essence.

13.2 GENERAL

An addendum is a change that is made to the contract documents of an advertised project before bid opening. Addenda are issued primarily to correct significant errors, omissions or conflicts in the bid documents. Addendum requests are reviewed by DES-OE and are either denied or approved and processed. Once bids have been opened, project changes can only be made by either rejecting all bids and re-advertising as a new project, or by issuing a contract change order (CCO) during construction.

13.3 ROLES AND RESPONSIBILITIES

PE

- Prepares addendum request.
- Contacts SOE and other affected units regarding potential addendum items.
- Consolidates all items from other functional units in the addendum request.
- Obtains approval from FHWA for full oversight federal aid projects.

DOE

Reviews and processes the approved addendum requests.

OTHER FUNCTIONAL ENGINEERS AND PROJECT MANAGER

Concurs with the revisions in the addendum request.

DEPUTY DISTRICT DIRECTOR, CONSTRUCTION

Reviews the addendum revisions.

DEPUTY DISTRICT DIRECTOR, DESIGN/MAINTENANCE

Approves and signs the addendum request to revise the contract plans, specifications and/or estimate.

DISTRICT DIRECTOR

Approves and signs the addendum request to recommend postponement of bid opening if within 72 hours of bid closing.

DES-OE

- Approves and issues the addendum.
- Furnishes FHWA with a copy of the contract addendum issued on full oversight federal aid projects and a certification that prospective bidders have received copies of the contract addendum at the time concurrence with award of the contract is requested.

13.4 ADDENDUM REQUEST

Addendum requests are to be made in writing and processed through the DOE. Contract changes proposed by SOE and other functional units must be requested through the district and processed by the DOE. Addendum requests must provide clear, concise, and complete information.

An addendum request to postpone a bid opening more than 72 hours before bid opening shall be signed by the Deputy District Director. If within 72 hours of bid opening, only the District Directors, based on a cost-benefit analysis of postponement and revisions to a bid package, can approve recommendations to postpone bid opening.

FHWA ADDENDUM APPROVAL

FHWA approval is required for major changes to full oversight federal aid projects. An executed Prior Approval-Contract Addendum form (see Figure 13-1) for this addendum will be furnished to the Department by FHWA for the project record when the formal request for addendum approval is processed.

An addendum that changes the scope, either project limits or character of work, of a federally funded project is required to have an updated NEPA (National Environmental Policy Act) document, R/W Certification, and E-76.

The Department has been delegated blanket approval by FHWA for the following types of addenda:

1. Addenda affecting the bid solicitations and general provisions of the special provisions, including:

- Bid Opening Dates.
 - Contractors Licenses.
 - DBE Goals.
 - Minimum Wage Rates.
 - Changes Mandated by FHWA.
2. Addenda correcting approved plans, specifications, and estimate that do not affect the scope of the project:
- Additions or deletions of notes on the plans, addition of missing drawings, providing missing dimensions of an item, or to delete a reference.
 - Typographical corrections to specifications, additions of missing specifications, correcting conflicting provisions, and changes to clarify vague and ambiguous requirements.
 - Corrections to the estimate for contract items based on error only when the change is less than \$200,000.

CONTENTS OF ADDENDUM REQUEST MEMO

An Addendum Request Memorandum is to include:

- General description of the proposed changes and a description of the project.
- Rationale and justification for each item and the consequences of not making the change.
- Discussion of the fiscal impact if the addendum is or is not issued.
- Approval from other divisions affected by the revisions.
- Discussion of FHWA review and approval of proposed changes for projects requiring full FHWA oversight.
- Signature of the responsible Deputy District Director for the project.

The Addendum Request Memorandum is to also document:

- Concurrence of responsible persons who have signed and sealed various elements of the PS&E. For example, if road specifications are revised and the DOE signed and sealed them, then the DOE's concurrence must be noted in the body of the memorandum.

- Concurrence of the Project Manager if the bid opening date, project cost, or scope is to be changed.

A sample Addendum Request Memorandum is shown in Figure 13-2.

REASONS FOR DENYING ADDENDUM

DES-OE will not normally issue an addendum if the:

- Project is still biddable without the addendum, and the revisions can be implemented as economically by CCO.
- Proposed addendum will not alter the character of the proposed work or change whom the bidders, subcontractors and suppliers might be. For example, revisions to quantities, except for Final Pay quantities, that will probably not change unit bid prices or cause item quantity adjustments are, normally better handled by CCO during construction.
- Proposed addenda materially changes the scope, character, cost, or limits from those authorized in the NEPA approval, PS&E approval, or E-76 authorization without FHWA approval.

METHOD OF ISSUING ADDENDUM

DES-OE issues addenda to bidders by facsimile or overnight mail depending on the type of addendum and time constraints. Non-bidders receive addenda by facsimile or regular mail. DES-OE will issue addenda by facsimile whenever possible. If facsimile receipt cannot be confirmed, then the addendum is sent by overnight mail. Overnight mail is used when an addendum has attachments or if plan sheets are involved.

TIME CONSTRAINTS

To allow sufficient time to process addenda within the scheduled advertising period, DES-OE must receive addendum requests no later than the third Monday before bid opening.

If the addendum involves major processing (e.g., many plan sheet changes) or impacts pre-bid submittal review time of prospective bidders, subcontractors, and suppliers, DES-OE must receive the addendum request no later than the fourth Monday before bid opening.

When there is insufficient time for processing and analyzing addenda, DES-OE will issue an addendum to either postpone the bid opening date or cancel the current advertisement date and re-advertise later.

DES-OE may consolidate multiple addendum requests until the third Monday before bid opening. However, DES-OE will immediately issue addenda that may affect how the bid is prepared, who might bid on the project, or which suppliers and subcontractors might be interested.

13.5 REFERENCES

Public Contract Code 4104.5 and Decision Document "72 Hours Timely Notice to Bidders of Bid Opening Postponement."

Figure 13-1
Prior Approval Contract Addendum Form

U.S. DEPARTMENT OF
TRANSPORTATION
FEDERAL HIGHWAY
ADMINISTRATION
CALIFORNIA DIVISION OFFICE

RECORD OF PRIOR APPROVAL
FOR CONTRACT ADDENDUM

PROJECT NO. ADDENDUM NO. CONTRACT NO. DIST-CO-RTE-KP

REQUESTED BY ☐ HQ DATE: _____
 ☐ REGION / DISTRICT

PROPOSED CHANGE:

REASON FOR CHANGE:

RECOMMENDATION FOR APPROVAL

APPROVAL

FHWA Field Operations Engineer

Director, Field Operations

DATE _____

DATE _____

Rev 2/2004 (Copy to CT)

Figure 13-2
Sample Addendum Request Memorandum

Memorandum

TO: Chief, Office of Plans, Specifications and Estimate Date: May 17, 2004
Attention: Area Senior
FROM: DEPARTMENT OF TRANSPORTATION - 04 File: 04-123454
SUBJECT: Request for Addendum

Request an addendum be issued to redefine the limits of trimming of plants for sound wall construction, to correct a final pay quantity, and to change a structural section for construction on State Highway in Sonoma County in and near Cottonwood.

The structural section beneath the concrete barrier has been revised. This is a significant change that will save the State about \$100,000. The change was the result of a cost-reduction study after submittal of the PS&E to reduce the project's cost to within its budgeted cost.

Clearing and grubbing was erroneously given standard treatment. The environmental report requires that clearing and grubbing be kept to a minimum in this environmentally sensitive area. The impact on the work and cost of this change in clearing and grubbing is minimal. It could probably be handled by contract change order. It is offered in anticipation that an addendum will be justified for other reasons and that the effort to incorporate this change could be incidental.

The final pay quantity of minor concrete (minor structure) was erroneously calculated and checked. The actual quantity is twice what is shown in the estimates and on the plans. The omitted quantity is minimal and amounts to some \$1000. To leave it as it is would be biddable, as adequately provided for in the Standard Specifications, but would not be consistent with our policy on final pay quantities. An addendum would not have been requested for this change alone.

The proposed addendum should address the following items:

Project Plan Sheet No. 3 and 21 are revised. Redline prints of proposed changes are attached.

In the special provisions, in Section 10-1.11, "Clearing and Grubbing," delete the second paragraph and add the following:

"Only such trimming and pruning of plants as is necessary for construction of sound wall shall be performed. The Engineer shall be notified a minimum of 48 hours before any trimming and pruning of plants necessary for construction of sound wall."

In the "Copy of the Engineer's Estimate," the estimated quantity of Item No. 31 is revised from 6 m³ to 10 m³. A redline print of the Engineer's Estimate is attached.

DES-SD has been contacted, and they had no addendum items to include.

Ken Jones, FHWA Field Operations Engineer, has reviewed the structural section change and concurred with the proposed change on April 26, 2004.

John Smith, DOE, has prepared the specification changes required. No other staff approvals were necessary.

Deputy District Director, Project Development

Attachments:

cc: IBG

Section 14 District Recommendation for Award

14.1 PURPOSE

The purpose of this Section is to provide guidance to the staff involved in the preparation of the District Recommendation for Contract Award.

14.2 ROLES AND RESPONSIBILITIES

PROJECT MANAGER

Reviews the award recommendation prior to submittal to DES-OE.

PE, DESIGN ENGINEER, AND DISTRICT OVERSIGHT ENGINEER

Provides information or clarification needed by DES-OE and may sign contract award recommendation.

DOE

- Acts as liaison for DES-OE and the district to resolve issues in a timely manner.
- Signs award recommendation (unless signed by someone else, then reviews and concurs with the recommendation).

14.3 DISTRICT CONTRACT AWARD RECOMMENDATION

DES-OE is responsible for preparing and processing the documents needed to award a contract or reject a bid. Districts/regions are responsible for recommending award of the contract or rejection of bids. The recommendation is required for all projects, and is due within five business days after bid opening unless prior approval for a time extension is given by DES-OE. The recommendation for informal bids contracts is due one business day after bid opening. Recommendations can be sent to DES-OE via facsimile at (916) 227-6282, or may be sent electronically to the Senior Transportation Engineer in charge of the Bid Opening, Award, and Services Unit. The recommendation is not to be revealed to contractors or external agencies.

Within one business day after bid verification, the DES-OE Awards Unit will provide the district with a printout of the bid opening results. This bid summary shows each bid item, the total bid, and the listed subcontractors for each bidder on a project.

The district/region shall use the following procedures to prepare all contract award recommendations.

The district should analyze the bids to determine whether to recommend award to the apparent low bidder. The district may also recommend rejection of an individual bid or all bids, in the event that none of the bids are acceptable. See Table 14-1, "Special Bid Situations."

The district is encouraged to contact the low bidder when there is only one bid, the low bid is more than 10 percent above the Engineer's Estimate, or the low bid is more than 25 percent below the Engineer's Estimate. See Table 14-1, "Special Bid Situations," for more information.

Although district personnel are cautioned to avoid discussing contract issues with bidders, it is permissible to inquire if the low bidder is satisfied with its bid and to discuss factors which may have influenced the bid. District personnel are encouraged to confer with DES-OE and appropriate Headquarters divisions before deciding whether a bid is acceptable.

At a minimum the recommendation should contain the following information:

- General project and bid information, e.g., "Bids for this project were opened on September 3, 2003. Nine bids were received; bids ranged from \$1,597,289 to \$2,170,264. The low bid is 15.53 percent under the Engineer's Estimate (EE) of \$1,891,000."
- Discussion of the differences between the bid items and the Engineer's Estimate. Be specific, e.g., "The bid prices have been reviewed and are in reasonable conformance with the Engineer's Estimate" or "Two items, Traffic Control System and Rock Excavation, account for 98% of the difference between the low bid and the Engineer's Estimate. The EE was based on blasting. The low bidder plans to excavate by ripping, resulting in substantial savings."
- Statement that the low bid has been reviewed for possible mathematical or material unbalancing per 23 CFR 635.102. Following are the U.S. Comptroller General's definitions of mathematically and materially unbalanced bids.

"A bid is mathematically unbalanced if the bid is structured on the basis of nominal prices for some work and inflated prices for other work; that is, each element of the bid must carry its proportionate share of the total cost of the work plus profits."

"A bid is materially unbalanced if there is reasonable doubt that award to the bidder submitting the mathematically unbalanced bid will result in the lowest ultimate cost to the Government."

See Table 14-1, "Special Bid Situations," if bid unbalancing is suspected.

- Statement describing water availability for construction per Deputy Directive 13, "Water Conservation."

- If applicable, a statement that local agency funds are (or are not) on deposit in accordance with cooperative agreement(s). If the funds are not on deposit, follow up with a confirmation once the funds are on deposit.
- If applicable, a statement that escrow by the three low bidders was successfully completed.
- If applicable, the Right of Way Certification has been updated.
- Any necessary clearances have been received or permits have been issued.
- Recommendation to award to the lowest responsible bidder of the bids received or to reject bids including justification for the recommendation.
- Signature of the District/Region Office Engineer; or if signed by someone else (Design Senior, Project Manager, etc.), then initialed by the DOE.

In the event that there is insufficient funding to award the contract, DES-OE will send the Project Manager a "Notice of Project Funding Problem." The district should contact DES-OE Office of Contract Awards and Services to discuss the alternatives identified in this Notice. Do not include recommended funding or estimate change requests in the recommendation without first discussing these alternatives with DES-OE.

When bids are lower than the Engineer's Estimate, it is inappropriate to add supplemental work items or increase the amount of the existing items or the contingency amount.

Table 14-1
Special Bid Situations

Special Bid Situation	Response to Special Bid Situation
The district is unable to contact the low bidder or considers such contact as unnecessary or inadvisable.	The district should explain the pertinent facts in the recommendation.
Examination of the bid reveals obvious unbalancing (e.g., a bid of \$1.00 for plant establishment work, or a unit price of \$0.01 for imported borrow).	The district should: <ul style="list-style-type: none"> • Determine if the unbalancing is merely mathematical or is unbalanced to the detriment of the State (material unbalancing). • Contact DES-OE if the unbalancing is material.
Only one bid is received.	The district is to contact other proposal book holders to inquire as to the reasons for not bidding. This information may be useful in supporting a recommendation to reject the bid or award to the low bidder. The pertinent facts of this investigation should be included in the recommendation

Special Bid Situation	Response to Special Bid Situation
The project has A+B provisions. (In A+B projects, the contractor bids on the items ("A" total) as well as the number of days to complete the project ("B" total). Bidders are compared and ranked on the A+B total.	The district should analyze the low bidder's bid for days to complete the work, "B," to determine if the work can reasonably be accomplished within that timeframe.
The low bidder has a recent history of contract terminations for cause or documented performance problems on the Department's projects.	The district is to include specific contract history relating to the low bidder's performance problems in the recommendation and should recommend rejection of the bid.
The district recommends rejection of all bids on the project.	The district shall include written justification to support the recommendation to reject all bids and include this information in the recommendation. This justification must include specific actions the district will take to improve the competitive bidding if the contract is to be readvertised at a later date. If funding was inadequate, the district should state whether it will rescope the project or seek additional funding from the CTC. Note: Bid rejections must be approved by the Chief Engineer.
The low bid is 25 percent or more below the Engineer's Estimate.	The district should: <ul style="list-style-type: none"> • Contact the low bidder to determine if the bidder is satisfied with the bid. If the bidder indicates a mistake was made in the bid, the district may refer them to Section 2-1.095, "Relief of Bid" in the Standard Specifications. • Review the Engineer's Estimate for errors in the item prices. • Mention in the recommendation the factors resulting in the low bid.
The low bid is 10 percent or more above the Engineer's Estimate.	The district should: <ul style="list-style-type: none"> • Discuss the bid with the low bidder. • Determine if the competition was adequate. If bidding was limited, the district should contact the proposal book holders who elected not to bid to determine why they did not bid. • Determine if the timing of the bidding influenced the number of bidders or the bid

Special Bid Situation	Response to Special Bid Situation
	<p>amounts.</p> <ul style="list-style-type: none">• Determine if the Engineer's Estimate was realistic (discuss the structure portions of the work with DES-SD).• Determine if the project should be rescope, and determine the consequences of any delay.• Mention in the recommendation the factors resulting in the high bid amounts.
No bids received.	The district is to contact proposal book holders to inquire as to the reasons for not bidding, and the DES, Office of PS&E, to discuss alternatives, e.g., scheduling a new bid opening date or rescope the project.

Section 15 Authority to Advertise District Delegated (AADD) Projects

15.1 PURPOSE

AADD is an elective process intended to eliminate or reduce rework and achieve earlier project advertisement. Under the AADD process, districts submit projects that are certified as RTL and funded. These projects are listed for advertisement immediately without verification of the draft contract by DES-OE.

The following projects are currently eligible for the AADD process:

- SHOPP projects programmed for less than \$1 million, that the CTC has delegated funds approval authority to the Department.
- Minor "A" funded projects, without other sources of funding (e.g., local funds, STIP, SHOPP, etc.).
- Maintenance funded (HM) projects regardless of size.
- Safety Projects (201-010) less than \$2 million.

Note that building projects are not eligible to be processed under AADD.

15.2 ROLES AND RESPONSIBILITIES

DISTRICT/REGION DIRECTOR

Approves Authority to Advertise as delegated.

DOE

- Verifies projects' eligibility for the AADD process.
- Establishes a schedule for meeting the AADD projects' PS&E milestones in the district.
- Assigns a District AADD Coordinator who will be responsible for submitting AADD projects to DES-OE, for monitoring the AADD projects' progress through DES-OE, for proofreading the contract documents, and for requesting any addenda.

The DOE prepares and finalizes participating projects before submittal to DES-OE by performing the following tasks:

- Ensures that the project design is complete, biddable and buildable.
- Prepares the project special provisions.

- Verifies and substantiates the need for proposed deviations from SSPs, and fully justifies deviations.
- Ensures that the project plans are in conformance with the Plans Preparation Manual and CADD Users Manual. Ensures that the CADD Submittal Form is completed.
- Ensures that federally eligible projects receive a Federal Authorization to Proceed (E-76).
- Ensures that required approvals for deviations from standards or policies have been obtained from FHWA, applicable HQ functional programs, and the responsible Deputy District Director, as appropriate.
- Verifies that the Engineer's Estimate is complete for the work to be done, and that the correct segregated estimates have been prepared.
- Ensures that the structure portion of the project (including log of test borings) and specialty work portions (landscape and electrical) are correctly combined with the roadwork plans, specifications, and estimates, and that all conflicts are resolved and duplications are removed.
- Compiles the Right of Way certification, permits, funds requests, materials information, foundation reports, etc., for the project. Identifies all information for the project that is to be made available as a handout to prospective bidders.
- Verifies whether the district will make cross sections available to bidders or not.
- Identifies any other agencies that will be involved in the project. Verifies whether all the conditions and requirements of permits obtained from such agencies are cited in the PS&E and have been met or waived.
- Verifies construction windows, permit conditions, regulatory agency constraints, seasonal requirements, etc., which could affect start and end of construction, or otherwise impact the construction schedule.
- Verifies railroad involvement. If a railroad is involved, obtains railroad clearances and obtains and adds the necessary railroad specifications.
- Verifies that all environmental clearances have been obtained and that the project plans and specifications incorporate all actions and steps necessary to ensure compliance and commitments included in the environmental document.
- Indicates whether experimental or research features are involved.
- Indicates whether availability of water in the project for use in construction is a significant factor.

- Indicates whether availability of water for use in new planting and irrigation work is a significant factor.
- Verifies that the Storm Water Data Report has been completed.
- Determines the appropriate Contractor's license.
- Obtains the required signatures for the Authority to Advertise form.

DES-OE

DES-OE will not perform any engineering review of AADD projects. However, DES-OE will provide the following services for AADD process projects:

- Set up and maintain the AADD database.
- When the AADD projects are received, the advertising date will be set based on the three-week listing period.
- Set the advertising and bid opening dates.
- Download the project plans and submit to reproduction.
- Lock and download the BEES and generate the Engineer's Estimate.
- Set the DVBE or the DBE goals.
- Add the seals and boilerplate sections to the special provisions.
- Generate the Proposal and Contract book.
- Submit the contract books to reproduction.
- Implement the AADD performance measures and performance indicators.
- Advertise, open bids, award, and process contract approval.
- Perform IA on the contract documents.
- Review and process addendum requests.

15.3 SUBMITTAL REQUIREMENTS

See Section 10, "PS&E Submittal Requirements."

15.4 LISTING FOR ADVERTISEMENT

A three-week minimum listing period begins upon receipt of an AADD project in DES-OE.

15.5 ADDENDA

The District AADD Coordinator is to contact the DES-OE Area Senior if there is a need for an addendum. The addendum process for AADD projects is the same as described in Section 13, "Contract Addendum Requests."

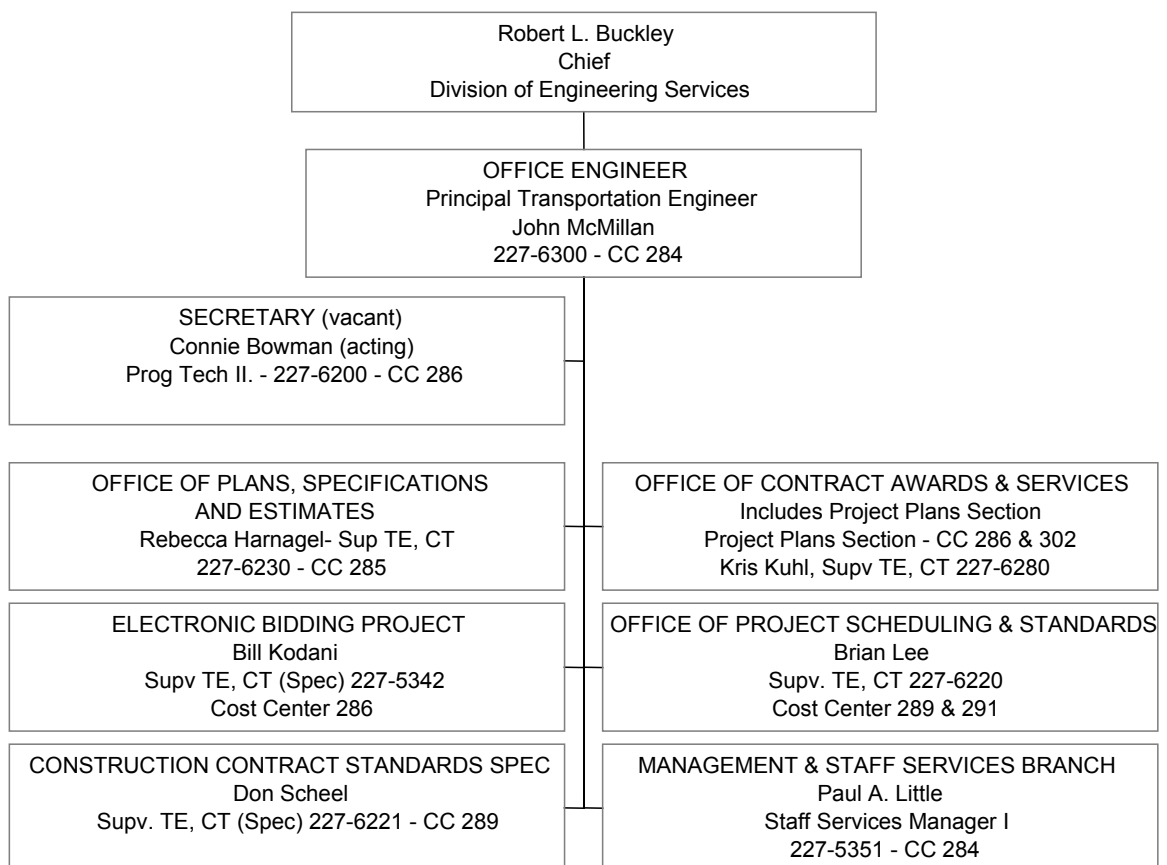
15.6 OPEN BIDS AND AWARD

See Section 4.7, "Bid Opening and Award."

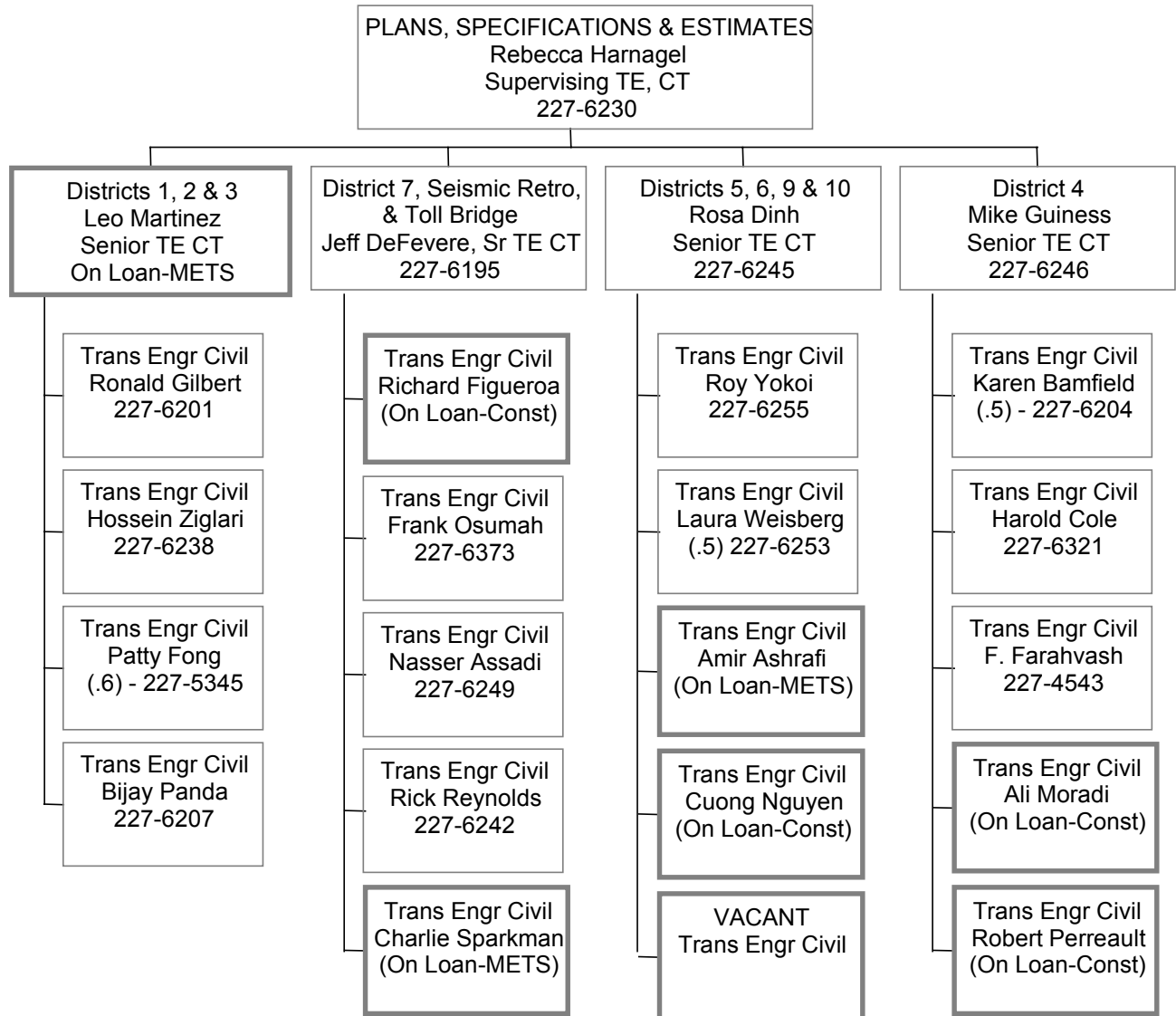
PART 3 APPENDICES

Appendix A DES-OE Organization and Contacts

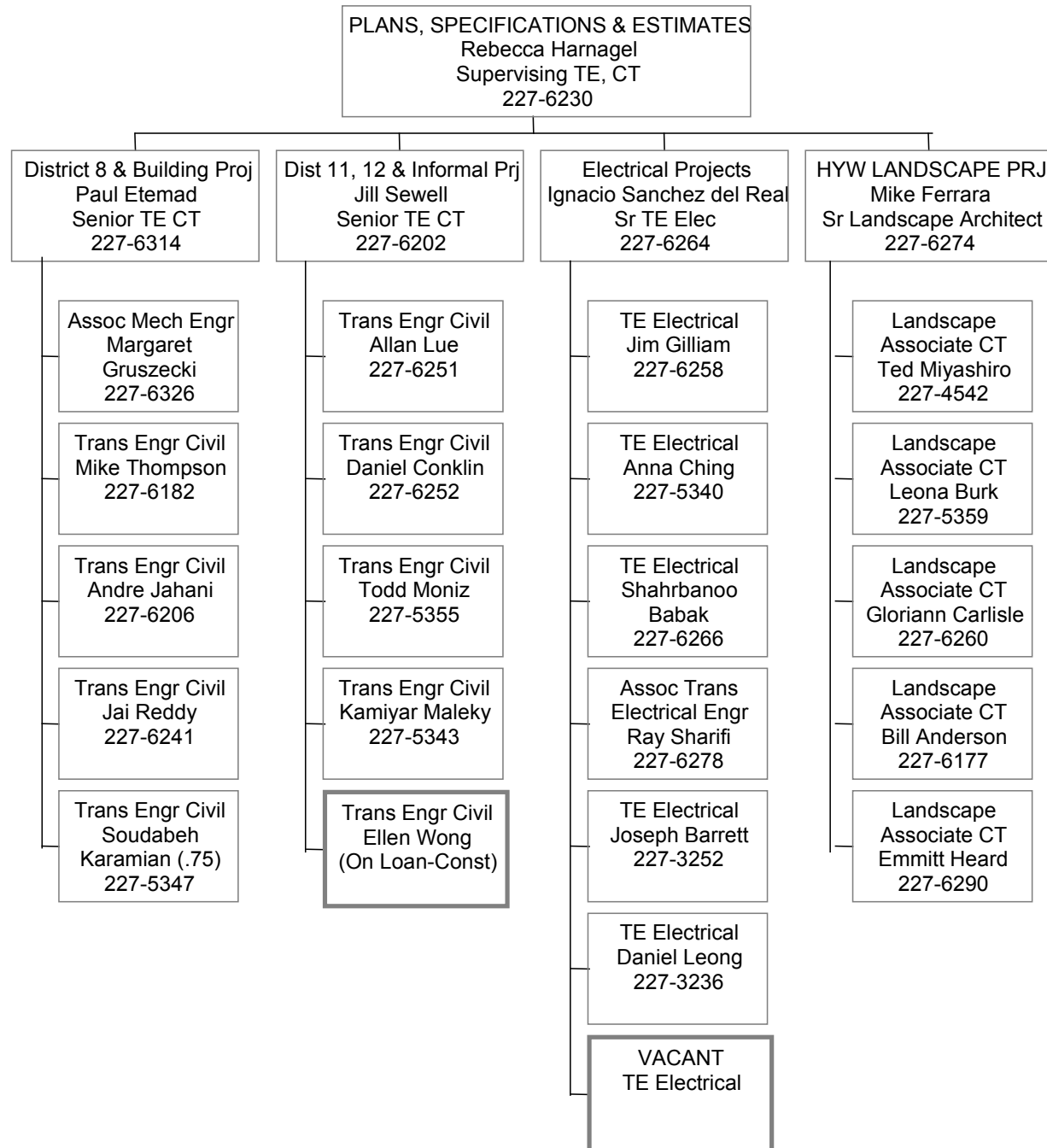
Division of Engineering Services
Office Engineer
April 15, 2004



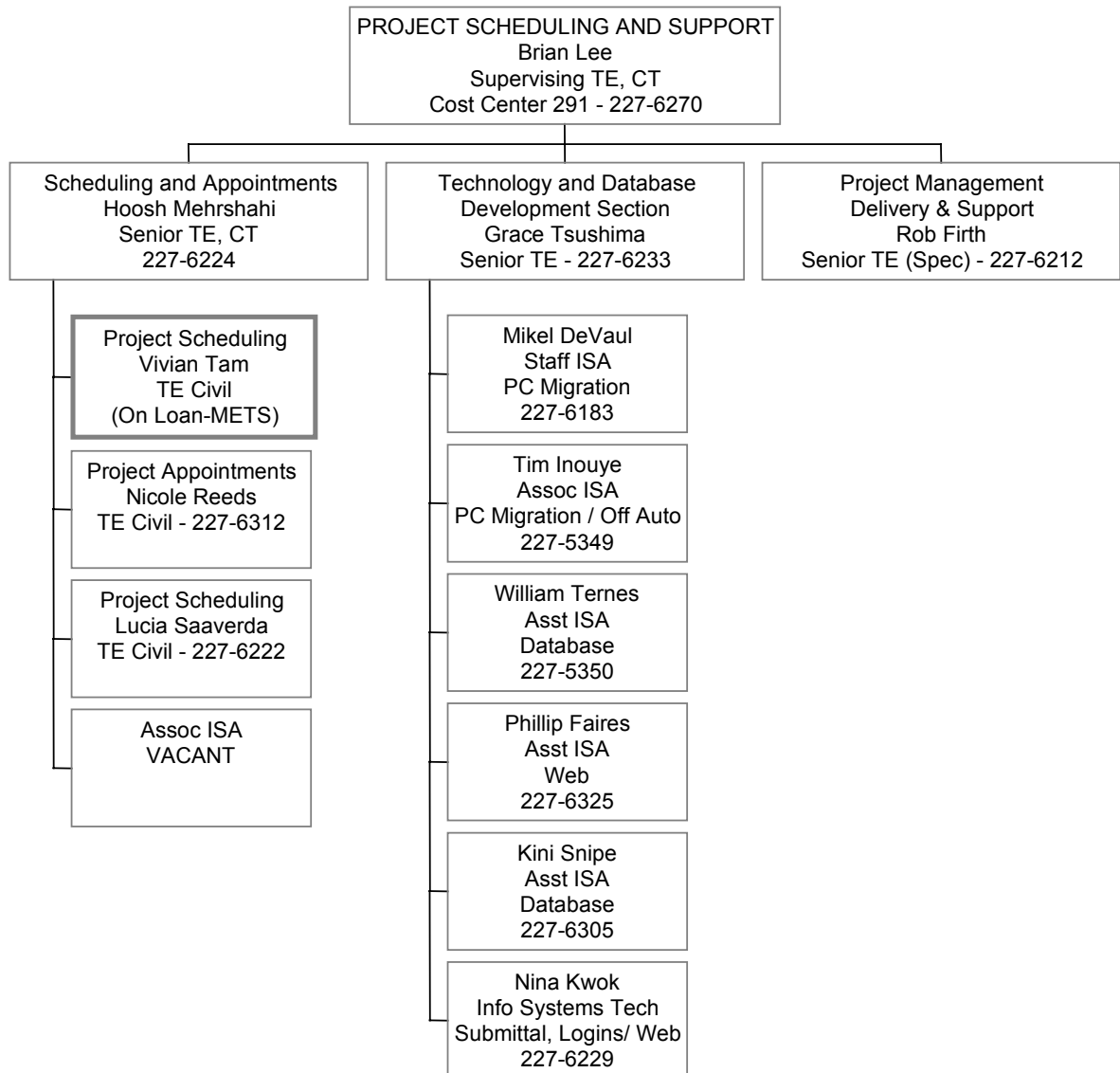
Division of Engineering Services
Office Engineer
Office of Plans, Specifications, and Estimates
April 15, 2004



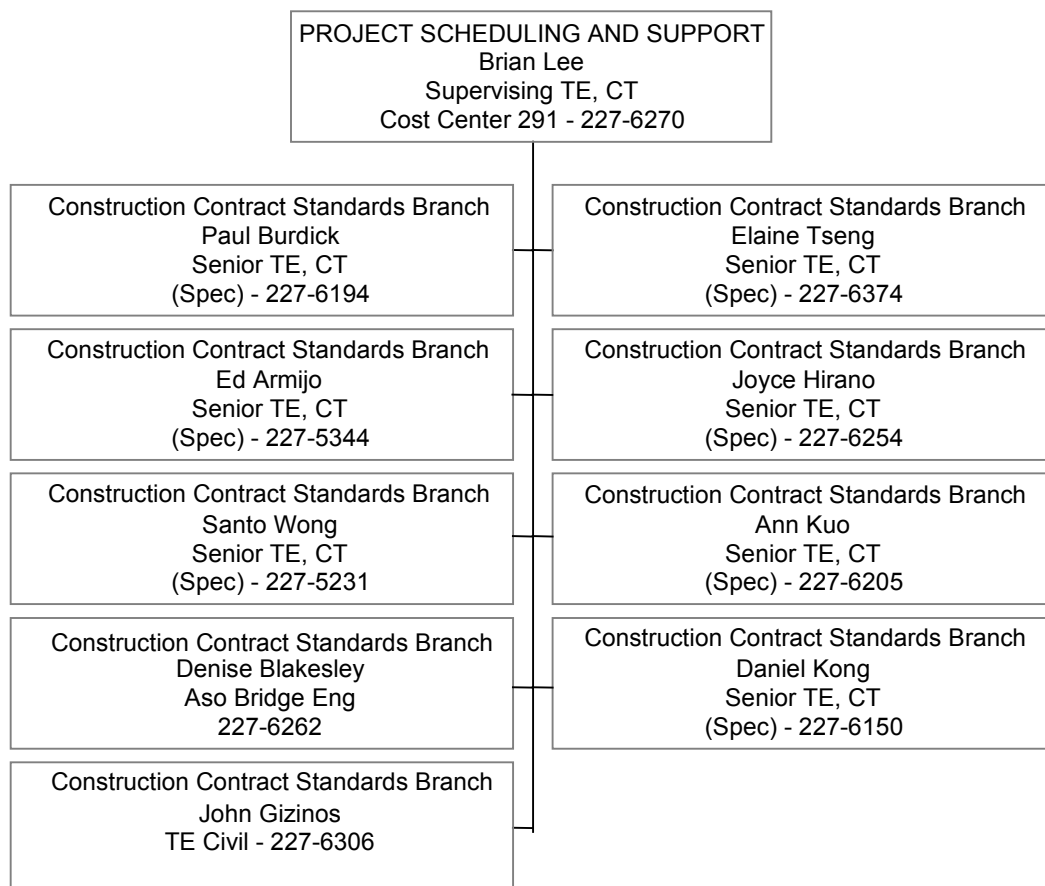
Division of Engineering Services
Office Engineer
Office of Plans, Specifications, and Estimates
April 15, 2004



Division of Engineering Services
Office Engineer
Office of Project Scheduling and Support
April 15, 2004



Division of Engineering Services
Office Engineer
Office of Project Scheduling and Support
April 15, 2004



Appendix B Forms and Miscellaneous Information

1. List of Standard Type of Work Descriptions
2. PS&E CADD Submittal Form
3. Project Plan Review Checklist
4. PE's Certification of Utility Facilities
5. Budget Verification of Special Funded Projects
6. Budget Verification of Highway Maintenance Funds
7. District PS&E Quality Feedback
8. FHWA Oversight Determination
9. Materials Information Cover Sheet
10. Transmittal and Request for Approval of Public Interest Finding (PIF)

STANDARD TYPE OF WORK DESCRIPTIONS

"Type of Work" is a concise description representing the majority of the work. This table lists the work descriptions most commonly used and should be used when possible. Where necessary, two descriptions may be combined (example, type of work could be Channelize and Modify Gore). "Type of Work Modifiers" are prefix modifiers most commonly used with those descriptions marked by an asterisk (for example, type of work could be Repair Storage Building, Modify Building or just Building).

Asphalt Concrete Surfacing	Ramp *
Bridge Railing *	Ramp Metering System
Bridge *	Realign Curve
Building*	Realignment
Channelize	Rehabilitate Bridge Deck
Clean and Paint Bridge	Rehabilitate Pavement
Clean and Paint Sign Structure	Repair Slope
Concrete Barrier *	Repair Storm Damage
Culverts *	Replace Bridge Bearings
Drainage *	Replace Joint Seals
Earthwork	Replace PCC Pavement
Electrical Facilities *	Retaining Wall *
Equipment Yard *	Roadway *
Erosion Control	Rock Slope Protection
Establish Existing Planting	Runaway Truck Ramp
Expressway *	Scale Facility *
Fence *	Seal Coat
Flashing Beacons	Seal Cracks
Freeway and Structures	Signals *
Freeway *	Signs *
Grading and Paving	Slurry Seal Coat
Groove Pavement	Sound Wall *
Guard Railing *	Storage Building *
Highway Planting	Viaduct *
Inspection Facility *	Wastewater Disposal System *
Interchange *	Water Supply System *
Interconnect Signals	Wheelchair Ramps
Irrigation System *	Widening
Lighting *	Wing Wall *
Maintenance Station *	
Modify Gores	
Overcrossing *	TYPE OF WORK MODIFIERS
Overhead *	
Park and Ride Facility	Modify

Passing Lane
Pavement Markers
Pavement Markings
Pumping Plant Equipment *

Reconstruct
Remove
Repair
Replace

PS&E CADD Submittal Form

(This Form Should Be Filled Out By The Qualified CADD Contact Person)

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

PS&E CADD SUBMITTAL

DES-OE -0021 (Rev 03/28/01)

Date _____

This is a -- ☐ Original ☐ Revise/Replace ☐ Additional ☐ Addenda

Check Two

- ☐ District ☐ Structures
☐ Imperial ☐ Metric

Dist.SourceEA		District/County/Route	
Post Mile or Kilometer, Post			
District Project Engineer		Phone Number	Project Manager
District Structures CADD Contact Person		Delineator E-Mail Address	Calnet/Fax

PROJECT IDENTIFICATION

Node ID / Address / File Name		
Directory Size (Blocks/Bytes)	Total No. Files	Total CADD Sheets

PS&E DIRECTORY CHECKLIST

- | | |
|---|--|
| <input type="checkbox"/> Place Proper Signature | <input type="checkbox"/> File Design |
| <input type="checkbox"/> Place Registration Seal Information | <input type="checkbox"/> Delete Unused Named Views |
| <input type="checkbox"/> Follow Leveling Convention (As Per Manual) | <input type="checkbox"/> Directory / File Protection For DES-OE Access |
| <input type="checkbox"/> Follow Electronic File Naming Convention | <input type="checkbox"/> Plot Files Rotated 0 or 90 Degrees |
| <input type="checkbox"/> Remove Extraneous Information | <input type="checkbox"/> Plot Files Generated From Fenced Cut - lines |
| <input type="checkbox"/> Place All Files In PS&E Directory | <input type="checkbox"/> Display Properly |
| <input type="checkbox"/> Display Correct Levels In Design Files | <input type="checkbox"/> Specially Added Files (list) |
| <input type="checkbox"/> Check For Current Time/Date Stamp | |
| <input type="checkbox"/> Final Check Print Created On Current Plotting System | |
| <input type="checkbox"/> Establish Plot View For All Design Files | |

DES -OE Engineer's Revised Submittal Approval

(Initials)
DES -OE

Special Instructions:

For DES-OE Project Plans Use Only	
To: _____	
Date In _____	Date out _____
Package Received: _____	
Received by: _____	

Project Plan Review Check List

(For District Or Structures Use)

THIS CHECKLIST SHALL BE COMPLETED BY THE DESIGNATED PROJECT REVIEWER ONLY -PLEASE PRINT CLEARLY

DIST/STRUCTURES ☐ District ☐ Structures **IMPERIAL/METRIC** ☐ Imperial ☐ Metric

PROJECT I.D. _____ **Dist/SourceEA** _____
DIST. / COUNTY (S) / RTE (S) / PM

DATE REVIEWED _____ **PROJ ENGR** _____ **PHONE** _____

DRAFT REVIEWER _____ **DIST O.E.** _____ **PHONE** _____

IS THIS A CONSULTANT JOB ☐ Yes ☐ No

TYPE OF PLANS ☐ CADD ☐ CONV ☐ Other

TOTAL SHEETS _____
CADD CONV. OTHER

PROJECT REVIEW CHECK RECOMMENDS...

- ☐ SEND PLANS TO DES-OE WITH PS & E PACKAGE
☐ RETURN PLANS TO PROJ ENGR FOR ADDITIONAL CHANGES

TITLE SHEETS

- ☐ Seal / Signatures
- ☐ Design Oversight Approval for Consultant Projects- Lower Left (Printed Name, Signature, Registration No., Date of Signature) and PS&E Note
- ☐ North Arrow / Bar Scale or No Scale
- ☐ Correct Contractor's Note (lower left)
- ☐ County(ies) Where Project Located Shown on Location Map (Outlined / Crosshatched)
- ☐ Project Description in Accordance With Section 2-2.1 (B) Of The Plans Preparation Manual
- ☐ Leave Sheet Index Blank
- ☐ Check All Lettering
- ☐ All Features In Project Title Must Be Identified On Strip Map
- ☐ Project E.A. In Lower Rt. Border
- ☐ Dist. / Co. and Disclaimer Note
- ☐ Show Destinations W / Arrow On Strip Map
- ☐ Show City or County Limits
- ☐ Show City Names Of Incorporated / Unincorporated Areas (caps / upper/lower respectively)
- ☐ Bridges Shown By Symbol, Also Show Bridge Name, Type (O.C. or U. C.) and Number if Structure Plans Are Included
- ☐ Label Waterways/Railroads and All Relevant St Names
- ☐ Identify All Signed Routes On Strip Map (use no shields)
- ☐ Show Construction Limits Or Location Of Construction Including Stationing and K.P.'s

PLAN SHEETS

- ☐ Seal & Signature
- ☐ North Arrow (use appropriate size)
- ☐ Scale (if applicable)
- ☐ Proper Sheet Identification in Lower Rt. Corner Including The Correct Sheet Identification Code / Plan Number
- ☐ Use Standard Line Symbolology (dropout where applicable)
- ☐ Lettering Or Text (dropout where applicable)
- ☐ Drainage / Profile Grids (should be in dropout)
- ☐ Check Details For Reduction Suitability
- ☐ Other _____

IMPORTANT

- ☐ Plot Verification _____
initial
- ☐ Electronic Date / Time Stamp
Indicated on plans

COMMENTS:

Revised 03/28/01

Project Engineer's Certification of Utility Facilities

_____ (Dist-Co-Rte-km)	_____ (EA)
_____ (description)	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> Within Construction Area? </div>
	<div style="display: flex; justify-content: space-around;"> yes* no </div>

----- REQUIRED INFORMATION -----

High Risk Facilities (list, describe with location, and disposition):

Low Risk Facilities (list, describe with location, and disposition):

(All High and Low Risk Utilities within the construction area must be positively identified.)

----- OPTIONAL INFORMATION -----

Other Utility Facilities (list, describe w/location, and disposition):

(Mark appropriate box)

☐ This project does **not** contain deviations from the Policy on High and Low Risk Underground Facilities Within Highway Rights of Ways.

☐ This project contains deviations from the Policy on High and Low Risk Underground Facilities Within Highway Rights of Ways. These deviations from policy have been reviewed and approved by the Chief, Design and Local Programs.

I hereby certify that the above listed facilities are located within the project limits and that this project conforms to the Policy on High and Low Risk Underground Facilities:

REGISTERED CIVIL ENGINEER
(SIGNATURE)

DATE



Note: For purposes of this certification, PE is considered to be the person in responsible engineering charge of the project.

**Budget Verification of Special Funded Projects
(NOT VOTED BY CTC)**

DISTRICT:

EXPENDITURE AUTHORIZATION:

COUNTY:

ROUTE:

KILOMETER POST:

ESTIMATE OF COST: \$

FISCAL YEAR(S):

SOURCE OF FUNDS:

SIGNATURE	DISTRICT RESOURCE MANAGER	DATE
-----------	---------------------------	------

BUDGET VERIFICATION
OF
HIGHWAY MAINTENANCE FUNDS
(Program 20.80)

DISTRICT:
EXPENDITURE AUTHORIZATION:
COUNTY:
ROUTE:
KILOMETER POST:
PROJECT
TITLE:

WORK TYPE:
ESTIMATE OF COST:
FISCAL YEAR(S):
REMARKS: Split funding: \$ in FY and \$ in FY
Dollar Job: \$1 in FY and \$ in FY .

SIGNATURE (District Maintenance Engineer) DATE

District Maintenance Funds have been allocated for this project:

SIGNATURE (District Resources Manager) DATE

HQ HM Concurs with fund allocation

SIGNATURE (HQ HM Budget Liason) DATE

DISTRICT PS&E QUALITY FEEDBACK

DES-OE Specification Engineer:

This feedback is to be prepared for all projects regardless of Services requested. The feedback will be used to recommend a baseline for acceptable quality of a district PS&E. Check the appropriate boxes that apply.

DOE:

This feedback is provided to assist you with the preparation of future PS&Es. Please share the feedback with the PE.

Project Information:

Dist-Co-Rte-KP:_____

DEA:_____

Proj. Cost Estimate at Submittal:_____

No. of Plan Sheets:_____

No. of Contract Items:_____

Service Level: ☐ 1 ☐ 2

PS&E Readiness:

☐ Draft Contract Ready as Received

☐ Not Draft Contract Ready – Needs Revisions

Proj. Cost Estimate at DCR:_____

No. of Rev. Plan Sheets at DCR:_____

No. of Contract Items at DCR:_____

Personnel:

District:

DOE Senior:_____

Specification Engineer:_____

Project Engineer:_____

DES-OE:

Specification Engineer:_____

Area Senior:_____

Project Plans:

1. Were there any missing project plans? ☐ Yes ☐ No

If so, list the missing plan sheets:_____

2. Were there any non-conforming project plans? ☐ Yes ☐ No

If so, which policy did it deviate from?: PPM, High and Low Risk Policy, Other _____

3. Were there any missing details? ☐ Yes ☐ No

If so, list the missing details:_____

4. Were there any plan sheets replaced during draft contract processing? ☐ Yes ☐ No

If so, list the replaced plan sheets:_____

Contract Specifications:

1. Were there any missing specifications? ☐ Yes ☐ No

If so, list the missing specifications:_____ (Example SSP 19-010)

2. Were there any non-conforming specifications? ☐ Yes ☐ No

If so, list the non-conforming specifications under the category provided:

Unapproved NSSPs: _____

Incorrectly edited specifications: _____

Others, list: _____

Project Cost Estimate:

1. Were there any missing contract, Supplemental and/or State-furnished items? ☐ Yes ☐ No

If so, list the missing items: _____

2. Were there any non-conforming items? ☐ Yes ☐ No

If so, list the item numbers in the indicated categories:

Item Incorrectly and/or not designated as specialty "S" or final pay "F": _____

Non-standard Unit of Measure: _____

Incorrect Item Code Number: _____

Incorrect Item Code Description: _____

Contingencies deviated from the 5% but no Approval: _____

Mobilization is required but not included: _____

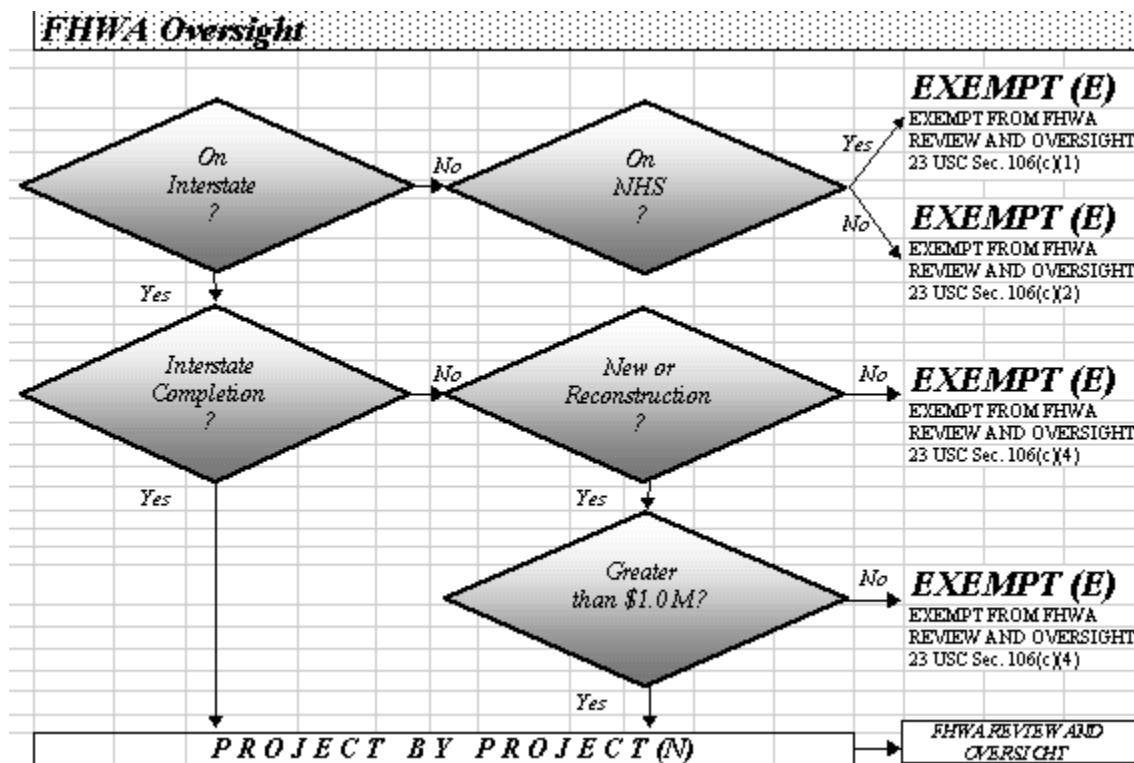
Mobilization deviated from the 10% but no Approval: _____

SW Items that exceed the limit but no Approval: _____

Others, list: _____

FHWA Oversight Determination

Note that the designation "Exempt" is now changed to "State Authorized," and the designation "Non-Exempt" is now changed to "Full Oversight."



Passage of the Transportation Equity Act for the 21st Century (TEA-21) modified the original delegations to the States by the Federal Highway Administration (FHWA) as provided by the Intermodal Surface Transportation Act of 1991.

Under the provisions of Section 106(c) of Title 23 of the U.S. Code, the Department has assumed responsibility for design, plans, specifications, estimates, contract awards, and inspections of projects described below unless the State or FHWA determines that such assumption is not appropriate.

Section 106(c)(1)

- For projects that are on the National Highway System but not on the Interstate System.

Section 106(c)(2)

- For projects that are not on the National Highway System.

Section 106(c)(4)

- Unless otherwise provided in Section 106, provisions of the May 12, 1992 Stewardship Agreements continue to apply. This means that the Department continues to assume

responsibility for design, plans, specifications, estimates, contract awards, and inspections of 3R projects on the Interstate System. The Department also continues to assume responsibility for design, plans, specifications, estimates, contract awards, and inspections of new construction and reconstruction projects on the Interstate System (except Interstate Completion) estimated to cost less than \$1,000,000.

Reconstruction as used in the FHWA Oversight Determination chart on the previous page is defined as:

The addition of a lane (except climbing or auxiliary lanes).

Significant change in horizontal and/or vertical alignment.

Reconstruction of an interchange by adding moves, or relocating (widening ramps for storage or turning movements are not included).

Replacement of an entire bridge or major parts of an existing bridge (in such manner that it is equivalent to a new bridge).

Seismic retrofit projects for the following:

- Major or unusual structure.
- In excess of \$5 million per structure (work will be considered to have a substantial effect on the structural capacity of the structure).

Major modifications to Traffic Management Centers.

FOR CONTRACT NO.: 13-123454

INFORMATION HANDOUT

WATER QUALITY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
NORTH COAST REGION, SAN FRANCISCO BAY SECTION, LOS ANGELES
REGION, LAHONTAN REGION, SANTA ANA REGION, CENTRAL VALLEY
REGION, CENTRAL COAST, OR COLORADO RIVER BASIN

BOARD ORDER NO. ##-###
NPDES PERMIT NO. CAS#####

PERMITS

CALIFORNIA DEPARTMENT OF FISH AND GAME
NOTIFICATION NO. ##-####
UNITED STATES ARMY CORPS OF ENGINEERS
NON-REPORTING NATIONWIDE 404 PERMIT
SAN FRANCISCO BAY CONSERVATION DEVELOPMENT COMMISSION
BCDC - M##-##
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
UNITED STATES COAST GUARD
STATE OF CALIFORNIA STATE LANDS COMMISSION
TAHOE REGIONAL PLANNING AGENCY

AGREEMENTS

CALIFORNIA DEPARTMENT OF FISH AND GAME
NOTIFICATION NO. #####
NATIONAL MARINE FISHERIES SERVICES
KARUK TRIBE MOU (Indian Reservation Ordinances)
UNITED STATES FISH AND WILDLIFE SERVICE

ENCROACHMENT PERMITS

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
PERMIT NO. #-#-###-####
COUNTY OR CITY DEPARTMENT OF PUBLIC WORKS
COUNTY PLANNING AND COASTAL DEVELOPMENT DEPARTMENTS

MATERIALS INFORMATION

SUMMARY OF FOUNDATION RECOMMENDATION REPORTS
OPTIONAL DISPOSAL/MATERIAL SITES
WATER SOURCE INFORMATION

ROUTE:

13-Sac-5-0.0/27.2

Public Interest Finding (rev. 2004)

U.S. DEPARTMENT OF TRANSPORTATION	FEDERAL HIGHWAY ADMINISTRATION		CALIFORNIA DEPARTMENT OF TRANSPORTATION
TRANSMITTAL AND REQUEST FOR APPROVAL OF PUBLIC INTEREST FINDING			
<input type="checkbox"/> Waiver To Buy America Requirements (23 CFR 635.410) <input type="checkbox"/> Experimental Contracting Methods <input type="checkbox"/> Informal Bid (Less Than Three Week Advertisement) <input type="checkbox"/> Use Of Force Account (Day Labor) <input type="checkbox"/> Use Of Publicly Owned Equipment		<input type="checkbox"/> Use Of State-Furnished Materials (23 CFR 635.407) <input type="checkbox"/> Mandatory Use Of Borrow/Disposal Sites (23 CFR 635.407) <input type="checkbox"/> Use Of Patented And Proprietary Materials (23 CFR 635.411) <input type="checkbox"/> Other:	
FEDERAL-AID PROJECT NO.	CLASS OF FEDERAL FUNDS: <input type="checkbox"/> IM <input type="checkbox"/> NH <input type="checkbox"/> STP <input type="checkbox"/> OTHER:		
EA	DIST-CO-RTE-KP (PM)	ESTIMATED COST	FEDERAL FUNDS
GENERAL LOCATION:		GENERAL DESCRIPTION OF WORK	
REASONS THAT REQUESTED APPROVAL IS CONSIDERED TO BE IN THE PUBLIC'S INTEREST (STATE):			
REMARKS (STATE):			
APPROVED BY STATE'S FEDERAL-AID-ENGINEER		TITLE:	DATE:
REMARKS (FHWA):			
APPROVED BY FHWA'S ENGINEER		TITLE:	DATE:
NOTE: FHWA'S SIGNATURE NOT REQUIRED FOR STATE-AUTHORIZED PROJECTS, EXCEPT FOR "BUY AMERICA"			
FNM-406 (REV. 2004)			

Appendix C Definition of Acronyms

AA.....	Advertise and Award	CMAQ	Congestion Mitigation and Air Quality Improvement Program
AADD.....	Authority to Advertise District Delegation	CTC.....	California Transportation Commission
ACR	Allocation Change Request	CTIPS	California Transportation Improvement Program System
AC	Asphalt Concrete	CO	County
ADA.....	Americans with Disabilities Act (Federal)	COZEEP	Construction Zone Enforcement Enhancement Program
ADL	Aerially Deposited Lead	CPM.....	Critical Path Method
ASTM	American Society for Testing and Materials	CPSD	Capital Projects Skills Development
BEES.....	Basic Engineering Estimating System	CTC.....	California Transportation Commission
BMP	Best Management Practices	DAF	Damage Assessment Form
BPM.....	Begin Post Mile	DBE	Disadvantaged Business Enterprise
CADD.....	Computer Aided Design and Drafting	DC	Draft Contract
CCO	Contract Change Order	DCR	Draft Contract Ready
CCR	California Code of Regulations	DES-OE	Division of Engineering Services, Office Engineer
CCSB	Construction Contract Standards Branch	DES-PCR...	Division of Engineering Services Project Change Request
CFR.....	Code of Federal Regulations	DFG	Department of Fish and Game

DGS	Department of General Services	GES	(Identification Code Prefix for Training Classes)
DIB	Design Information Bulletin	HDM	Highway Design Manual
DLAE	District Local Assistance Engineer	HM	Highway Maintenance (Code)
DOE	District Office Engineer	HOV	High Occupancy Vehicle
DR	District Response	HP	Highway Planting
DRB	Dispute Resolution Board	HQ	Headquarters
DVBE	Disabled Veterans Business Enterprise	IA	Independent Assurance
EA	Expenditure Authorization	ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
EB	Eastbound	KP	Kilometer Post
ED	Environmental Document	LS	Lump Sum
EPM	End Post Mile	METS	Materials Engineering and Testing Services
ETW	Edge of Traveled Way	MOU	Memorandum of Understanding
FHWA	Federal Highway Administration	NB	Northbound
FSTIP	Federal Statewide Transportation Improvement Program	NEPA	National Environmental Policy Act of 1969
FTIP	Federal Transportation Improvement Program	NPDES	Statewide National Pollutant Discharge Elimination System (State Permit)
FY	Fiscal Year	NSP	New Standard Plan
G-11	(a CTC resolution)	NSSP	New Standard Special Provision
		OC	Overcrossing

OH..... Overhead	PSR Project Study Report
PC..... Personal Computer	PY Person Year
PCC Portland Cement Concrete	QA..... Quality Assurance
PCE Project Coordination Engineer	QC..... Quality Control
PD Project Development	RCE..... Registered Civil Engineer
PDPM Project Development Procedures Manual	RE Resident Engineer
PDT Project Development Team	RR Railroad
PE Project Engineer (the Engineer of Record signing and sealing the Title Sheet of the Plans)	RSP Revised Standard Plan
PID Project Initiation Document	RSTP Regional Surface Transportation Program
PIF Public Interest Finding	RTL..... Ready-To-List
PM..... Post Mile	RU Responsible Unit
PM..... Project Manager	R/W Right of Way
PMCS..... Project Management Control System	RWQCB Regional Water Quality Control Board
PPDG Project Planning and Design Guide	SB..... Southbound
PPNO Planning Program Number	SER Standard Environmental Reference
PR..... Project Report	SHOPP State Highway Operations and Protection Program
PRC Public Resources Code	SI Safety Index
PS&E Plans, Specifications, and Estimate	SMARA..... Surface Mining and Reclamation Act
	SOE..... Structure Office Engineer
	SRRA..... Safety Roadside Rest Area
	SSP Standard Special Provision

STIP	State Transportation Improvement Program
SWPPP	Storm Water Pollution Prevention Plan
TEA	Transportation Enhancement Activities Program
TERO	Tribal Employment Rights Ordinances
TIP	Transportation Improvement Program
TMP	Traffic Management Plan
TRAMS	Transportation Accounting Management System
TRO	Time-Related Overhead
UC	Undercrossing
USACE	United States Army Corps of Engineers
USC	United States Code (Federal)
USCG	United States Coast Guard
VA	Value Analysis
WB	Westbound
WBS	Workload Breakdown Structure
XPM	(eXpert Project Manager™, a scheduling database)

Appendix D Websites

A+B Guidelines

<http://pd.dot.ca.gov/construction/contractmanagement/ABMEMO.pdf>

Asphalt Price Index, Quarterly California Highway Construction Cost Index, Contract Item Cost Data Summary and Coded Contract Item List

<http://www.dot.ca.gov/hq/esc/oe/costinfo.html>

Bid Summary Results

<http://www.dot.ca.gov/hq/esc/oe/bidsopened.html>

"Building Projects' Special Provisions" Memo of May 3, 2002

<http://t8web.dot.ca.gov/design/memos/050302.pdf>

Congestion Mitigation and Air Quality Improvement Program

<http://www.dot.ca.gov/hq/oppd/design/m021600.htm>

Contracts Register

www.cscr.dgs.ca.gov/cscr

CTC G-11 Resolution

<http://www.dot.ca.gov/hq/transprog/ctcliaison/Delegations/G-00-11.pdf>

Delivery Plan - Division of Project Management

<http://pd.dot.ca.gov/pm/ProjectOffice/DeliveryPlan/DeliveryPlan.asp>

DES Decision Documents

http://projdel.dot.ca.gov/des/decision_docs_date.asp

DES-OE Office of Contract Awards and Services Coded Contract Item Lists, Contract Cost Data Books, and Bid Summary Results

<http://www.dot.ca.gov/hq/esc/oe/awards/>

DES-OE Workload and Duration Estimating Tables

http://oe.dot.ca.gov/scheduling/wet/OE_Resource_Table.pdf

FHWA "Contract Administration Core Curriculum, Participant's Manual and Reference Guide"

<http://www.fhwa.dot.gov/programadmin/contracts/coretoc.htm>

FHWA California Division

<http://www.fhwa.dot.gov/cadiv/index.htm>

FHWA California Division

<http://www.fhwa.dot.gov/cadiv/index.htm>

FHWA Report and Submittal Requirements for Projects with Experimental or Research Design Features

<http://www.fhwa.dot.gov/programadmin/contracts/expermnt.htm>

FHWA Stewardship Agreement

<http://www.fhwa.dot.gov/cadiv/docs/stewardship.htm>

Funding Summary Table, Instructions, and Funding Package example

<http://oe.dot.ca.gov/Funding/>

Office Engineer Process Timeline Chart

http://oe.dot.ca.gov/scheduling/wet/OE_Timeline_Chart.pdf

Plans Preparation Manual

http://www.dot.ca.gov/hq/esc/oe/project_plans/drafting/dpmanual.pdf

PS&E Drop Box

<ftp://10.168.8.5/psedropbox>

RTL Guide and forms

<http://oe.dot.ca.gov/>

Specification Writers' Style Guide (to be published)

http://projdel.dot.ca.gov/des/documents/decisiondocs/specification_writers_style_guide.pdf

SSPs and the Standard Specifications

http://www.dot.ca.gov/hq/esc/oe/specs_html/index.html

Traffic Management Plan (TMP)

<http://onramp.dot.ca.gov/hq/traffops/otrafopr/index.php?pageID=1.32>

Appendix E PS&E Submittal Cover Memorandum

*This page intentionally left blank
to preserve the sheet numbering of the Cover Memo Form*

Memorandum

To: Division of Engineering Services, Office Engineer

Date:

Attn.: Scheduling Engineer
Mail Station 43

File:

From: DEPARTMENT OF TRANSPORTATION
DISTRICT __ OFFICE ENGINEER

Subject: Project Plans, Specifications, & Estimate (PS&E) Submittal

Priority Submittal: (Check one, if applicable.)

☐ Safety Project (010) or ☐ Informal Bid Project

Service: (Check one.)

☐ Level 1 or ☐ Level 2 (AADD)

Project

Identification:

Dist-Co-Rte. KP:			
Resp. Unit (Source Code):	PPNO:	Assembly Dist. ¹ :	
Primary/Combined EA:	Delivery Plan Yr.	Senate Dist. ¹ :	
Secondary EA ¹ :		Congressional Dist. ¹ :	

Description:

(Same as the Project Plan Title Sheet Description)
--

Type of Work:

(Menu)

Work Category: (Check one.)

New Construction ☐ Rehabilitation ☐
Reconstruction ☐ Preservation ☐
Operations ☐ Highway Planting ☐

Type: (Check all applicable.)

Roadway ☐ Building ☐ Electrical ☐
Structure ☐ Rest Area ☐ Erosion Control ☐
Soundwall ☐ Mitigation ☐

Approval: EA from Project Report: __ - __ PA/ED Date: __/__/__

Personnel:

State:	Name	Phone Number
Project Engr./Oversight Engr.:		
Drafting Standards Reviewer:		
District Reviewer: Roadway		
Electrical		
Landscape Architect		
Structure: Project Engr.		
Specification Engr.		
Estimator		
District Office Engr.:		
Project Manager:		

Local Agency or Consultant:	Name	Phone Number
Agency or Firm ¹ :		
Project Engineer ¹ :		
Contract Manager:		

Schedule:

Event	Date
XPM RTL	
Recommended Advertisement	
Recommended Begin Construction	

Target Dates for Incomplete Submittals:

Date

Right of Way:	2a Cert. No. ___, (If Cert. 3, provide upgrade type and date.)	
	2e Railroad Clearance:	
Environmental:	3. Cert.	
Design:	4c Approved Policy Exceptions ¹ :	
	Policy Requirement: _____, Exception	
	Storm Water Report Update and Approval	
	Cross Sections and Survey File to Construction RE and Surveys (No later than RTL date)	
	Water source construction commitment: Water source: <input type="checkbox"/> Potable <input type="checkbox"/> Non-Potable	
	Water source for planting and irrigation work commitment: Water source: <input type="checkbox"/> Potable <input type="checkbox"/> Non-Potable	
	4d Agreements ¹ : Agency _____	
FHWA	5a Design Approval	
	5b PIF Approval	

Performance Indicators:

Environmental	Permits and Agreements: Agency _____ Complete/Target Date. ____/____/____
Design:	RE Pending File: Submitted to Construction RE Target Submittal Date ____/____/____ (No later than RTL date)
	List Attached of Salvageable Materials
	Landscape:
	Compost: For erosion control (include hydroseeding and dry apply) _____ m ³ For plant material (plant holes/cultivation/top dressing) _____ m ³
	Erosion Control: (Type C) _____ hectares (Type D) _____ hectares (Drill Seed) _____ hectares
	Ground Cover: 1 year or less to cover area _____ hectares Over a year to completely cover area _____ hectares
	Highway Planting: _____ Replacement Planting (due to road work) Restoration Planting (due to deterioration) _____ hectares Mitigation Planting _____ hectares
	Mulch (include Green Material _____ m ³ mulch in basins): Wood chips/Tree bark/Shredded bark _____ m ³ Inert material for pesticide reduction _____ m ² (e.g., gravel, loose cobbles, decomposed granite, etc.)
	Recycled Water: Project incorporates recycled water for irrigation? ____ Yes ____ No If yes, check level of treatment: <input type="checkbox"/> Secondary <input type="checkbox"/> Tertiary Estimated annual recycled water usage: _____ acre ft/yr.
	Trees _____ Trees Planted: _____ # (Include acorns, seedlings, willow cuttings, multi-stemmed and standard trees)
	Wildflower seeding _____ m ² Or if not appropriate Value of wildflower seeding to be tracked for future project \$ _____ (must be 1/4 of 1% of planting & irrigation estimate.)
	Worker Safety: Gates and maintenance vehicle pullouts _____ # Maintenance access roads _____ m Paving & Rock Blanket _____ m ² (slope, narrow areas & extended gore areas)
Traffic Ops	The District Traffic Manager or Traffic Management Plan Manager, _____ (name), has verified on ____/____/____ (date), that all necessary Traffic Management Plan (TMP) elements are included in the PS&E.

Funding: (Project Funding Package attached and funding verified)

Programming Document: (Menu)

Program Code: (xx.xx.xxx.xxx)

Budget Year: _____

Is this project eligible for Congestion Mitigation and Air Quality Improvement (CMAQ)? ☐ Yes ☐ No

If yes, district must provide an emission reduction study to the Office of Federal Resources, Division of Budgets

1. Electronic format provides for multiple entries.

Federal Participation

"This project is eligible and programmed for federal funding and has been determined to be: ☐ Check if State Authorized regarding FHWA review and oversight per the Stewardship Agreement between the Department and FHWA. ☐ Check if Full Oversight, requiring full review and oversight by FHWA. Full Oversight determination was made by FHWA Transportation Engineer" _____: Dated ____/____/____ (Name & Date required)

For Federal Aid Projects

☐ Structures List Attached: (Name, Number, Type, Structure Begin & End Stations).

PS&E Information:

Plans: Standard Plans Year: _____

Sheets: _____ No. of Roadway: _____ No. of Structures: _____ Total No.: _____

Specifications: Standards Specifications Year: _____ General Conditions Year: _____

Construction Windows (Environmental, Construction Staging, Public Events, etc.):

Dates work can be performed ¹	Description and location ¹
From ____/____/____ to ____/____/____	

Information Handout:

Permits or Agreements¹: List all obtained for the project

--

Materials Information: Check if provided for project

☐ Optional Disposal Sites ☐ Water Source Information
☐ Summary of Foundation Recommendation Reports ☐ Other: _____

Notice to Contractors Information:

Cross Sections for this project available in the district:

☐ None ☐ Prints only ☐ Electronic only ☐ Prints and Electronic

Bidder Inquiries to be submitted on "Bidder Inquiry" forms:

☐ No ☐ Yes, Duty Senior Facsimile Number: _____

Prosecution of the Work:

Construction Working Days: (Do not include Plant Establishment Days)
Plant Establishment Working Days: Indicate Type 1 or 2 ☐
Total Working Days
Liquidated Damages: \$

Special Features: (Approval attached)

Asphalt Concrete Quality Control/Quality Assurance	<input type="checkbox"/>	Experimental Work Features	<input type="checkbox"/>
Aerially Deposited Lead (ADL) Site Reuse	<input type="checkbox"/>	Pre-Award Qualifications	<input type="checkbox"/>
Design Sequencing	<input type="checkbox"/>	Tribal Employment Rights Ordinance	<input type="checkbox"/>
Escrow Bid Documents	<input type="checkbox"/>	Value Analysis	<input type="checkbox"/>

Estimate:

Total Cost: No. of Contract items:
Call Out Number: BEES Keyword:

SUBMITTED BY: _____
(Signature Of DOE/ROE)

REVIEWED BY: _____
(Signature Of Project Manager)

List of Attachments:

- | | |
|--------------------------|---|
| <input type="checkbox"/> | Project RTL Certification (Always Required) |
| <input type="checkbox"/> | Project Funding Package (Always Required) |
| <input type="checkbox"/> | Approved exception to Department Electronic Standards |
| <input type="checkbox"/> | Special feature approvals |
| <input type="checkbox"/> | PS&E Distribution List |

1. Electronic format provides for multiple entries.

PS&E Distribution List

<input type="radio"/> <u>ADDRESSEE</u>	<input type="radio"/> <u>WHEN</u>	<input type="radio"/> <u>PORTION</u>
<input type="radio"/> District Project Manager	<input type="radio"/> ALL PROJECTS	<input type="radio"/> Cover Memo and RTL Certification (Draft or Final)
<input type="radio"/> Division of Engineering Services <i>Office Engineer (MS43)</i>	<input type="radio"/> ALL PROJECTS	<input type="radio"/> Email or facsimile information to DES OE staff using specific telephone number.
<input type="radio"/> Division of Engineering Services <i>Structure Office Engineer (MS9)</i>	<input type="radio"/> If Structures or Buildings involved	<input type="radio"/> Full PS&E package with project plans
<input type="radio"/> Division of Local Assistance <i>Office of Local Programs, Project Implementation (MS1)</i>	<input type="radio"/> If Measure or Local funding involved	<input type="radio"/> Cover Memo, RTL Certification (Draft or Final) and if all funding is Measure/Local etc., one copy of each Cooperative Agreement
<input type="radio"/> Division of Design <i>Office of State Landscape Architecture (MS28)</i>	<input type="radio"/> If project has more than \$120,000 of Highway Planting work	<input type="radio"/> Full PS&E package with project plans including water letters, Design Intent Statement and Fact Sheet
<input type="radio"/> Division of Maintenance (MS31)	<input type="radio"/> If HM funding involved	<input type="radio"/> Full PS&E package with project plans
<input type="radio"/> Division of Traffic Operations (MS36)	<input type="radio"/> If HB 1 Program	<input type="radio"/> PS&E package without special provisions
<input type="radio"/> Division of Traffic Operations <input type="radio"/> Toll Bridge Operations Branch (MS36)	<input type="radio"/> If Toll Bridge (TBF) Funding involved	<input type="radio"/> PS&E package without special provisions
<input type="radio"/> Division of Budgets <input type="radio"/> Office of Federal Resources (MS23)	<input type="radio"/> ALL PROJECTS Except Maintenance (HM program)	<input type="radio"/> Cover Memorandum & RTL Certification (Draft or Final) <input type="radio"/> R/W certification <input type="radio"/> NEPA Environmental certification <input type="radio"/> Funding Package: Funds Request Letter Engineer's Estimate - segregated BEES Cooperative Agreement <input type="radio"/> Location Map <input type="radio"/> Valid FTIP Amendment <input type="radio"/> Electronic FNM76 <u>Check applicable items and submit</u> <input type="radio"/> R/R Service Contract Agreement <input type="radio"/> Design Exception & Fact Sheet <input type="radio"/> Director's Order <input type="radio"/> Damage Assessment Form (DAF) <input type="radio"/> Letter of Justification for Public Interest Finding (PIF) Statement <input type="radio"/> Emissions Reduction Study <input type="radio"/> Value Analysis Study (if estimate over \$25 million) <input type="radio"/> Army Corp of Engineers 404 Permit <i>Important: Documents NOT submitted with the original package are to be sent by District Office Engineer to Federal Resources as soon as they are available. Projects will NOT be advertised until all documents are submitted and Federal Authorization has been obtained.</i> :

Appendix F RTL Certification Form

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in order to preserve the sheet integrity of the Certification Form*

Ready to List (RTL) Certification Form

Draft (No.)1	
Final (✓)	

1 Project Identification:	District-Co.-Rte.-KP: _____	Primary/Combined EA: _____	Secondary EA: _____
RTL Certification			
2 Right of Way:	<i>All right of way clearance, utility, and railroad work has been completed or all necessary arrangements have been made as required for proper coordination with the construction schedules. (23CFR635)</i> <i>Project has "R/W Certification" for advertisement when one of the following Certifications has been checked.</i>		
<input type="checkbox"/> 2a Cert. 1	All property has been acquired.		
<input type="checkbox"/> 2b Cert. 2	All property has been acquired and/or the State has the right to occupy or use.		
<input type="checkbox"/> 2c Cert. 3W	Right of way process is in order, but acquisition or Orders for Possession will not be completed until __/__/__. A work around has been approved to avoid unanticipated owner-caused delays.		
<input type="checkbox"/> 2d Cert. 3	Right of way process is in order, but acquisition or Orders for Possession will not be completed until __/__/__. Project cannot bid open until certified at the 1, 2, or 3W Level.		
<i>Project has railroad facility and Railroad Clearance when the following box has been checked.</i>			
<input type="checkbox"/> 2e Railroad Clearance Required:	Company: _____	Date: _____	
	Amount: _____		
Construction & Maintenance Agreement/Service Contract No. _____			
3 Environmental:	<i>PS&E fulfills environmental documents requirements. (23CFR771 and Title 13 PRC § 21000 et seq.)</i>		
<input type="checkbox"/> 3a	Environmental Certification is attached and dated __/__/__.		
4 Design:	<i>The Department shall determine the kind, quality, and extent of all highway work done under its control, and may prepare and approve all plans, specifications, and estimates for all such work. (S&HC 137).</i> <i>Project has "Design Standard Approval" when one of the following boxes is checked.</i>		
<input type="checkbox"/> 4a	Design equals or exceeds minimum mandatory and advisory standards		
<input type="checkbox"/> 4b	Design does not equal or exceed minimum mandatory and/or advisory standards and has approved exceptions for nonstandard features. Date of FHWA approval if project is full oversight: __/__/__		
<input type="checkbox"/> 4c	Project has "Statewide Design Policy Compliance" when the following applicable boxes are checked.		
<input type="checkbox"/>	A+B Bidding Policy Exception required and included. (Guidelines for Use of A + B Bidding Provisions)		
<input type="checkbox"/>	Buy America "Foreign Material" Waiver required and included. (23 CFR 635.410)		
<input type="checkbox"/>	Constructability Reviews Compliance: (Guidance on Constructability Reviews)		
<input type="checkbox"/>	Cross-section Policy Exception required and included. (Guidance on Creation of Cross Sections)		
<input type="checkbox"/>	Experimental or Research Design Features included: Design approved and work-plan funded. (Guidelines for Construction Evaluated Experimental Feature Program)		
<input type="checkbox"/>	Hazardous Waste identified and cleanup completed or project has an exception to include cleanup in the work. (PDPM CH. 18)		
<input type="checkbox"/>	High/Low Risk Utilities Policy Certification. (Policy on High and Low Risk Underground Facilities)		
<input type="checkbox"/>	Information Handouts required and included. (SSP S5-280, "Project Information")		
<input type="checkbox"/>	Pedestrian Facilities involved and comply. (DIB-82)		
<input type="checkbox"/>	Storm Water Data Report updated and approved on __/__/__. (Storm Water Quality Handbook)		
<input type="checkbox"/> 4d	Project has serious or critical water shortage and a water source commitment when the following applicable boxes are checked.		
<input type="checkbox"/>	Water source has provided written commitment to supply water for construction of the project.		
<input type="checkbox"/>	Water source has provided written commitment for new planting and irrigation work.		
<input type="checkbox"/> 4e	Project requires Agency Agreement(s).		
	1st Agency: _____	2nd Agency: _____	3rd Agency: _____
	Issue Date: _____	Issue Date: _____	Issue Date: _____
	\$ Amount: _____	\$ Amount: _____	\$ Amount: _____
5 FHWA Approval	<i>Project requires and has appropriate FHWA approval when one of the following boxes is checked.</i> <input type="checkbox"/> Project meets all Federal requirements pursuant to stewardship and delegation agreements (PDPM Chapter 2, Section 7). <input type="checkbox"/> Public Interest Finding (PIF) Approval – Project includes items that require and have FHWA approval.		
6 Plans, Specifications, & Estimate:	<i>Plans, Specifications, & Estimates are full, complete, and accurate. (PCC 10120)</i> <i>Project is "Draft Contract Ready" when all of the following boxes are checked.</i>		
<input type="checkbox"/> 6a	Plans prescribe the details for completion of the work, including details for items not covered by the Standard Plans.		
<input type="checkbox"/> 6b	Plans conform to Plans Preparation Manual.		
<input type="checkbox"/> 6c	Specifications prescribe the details for the construction, completion, and payment of the work.		
<input type="checkbox"/> 6d	Specifications conform to Specification Preparation Guidelines.		
<input type="checkbox"/> 6e	Estimates submitted in Basic Engineering Estimating System (BEES).		
<input type="checkbox"/> 6f	Estimates prescribe all the details for the construction, completion, and payment of the work.		

RTL Certified by:	
Project Engineer	Date
RTL Approved by:	
Design Engineer or Manager	Date

Affix or attach registration seal here.

1. Projects submitted with draft RTL Certification will not be assigned until:
- District PS&E is complete or
 - District Project Manager has an approved Concurrent Processing Service Agreement.

INDEX

*The Index is currently being developed
and will be installed soon.*

*In the meantime,
you may use the Find Function under the Edit Menu on the electronic .pdf version.*